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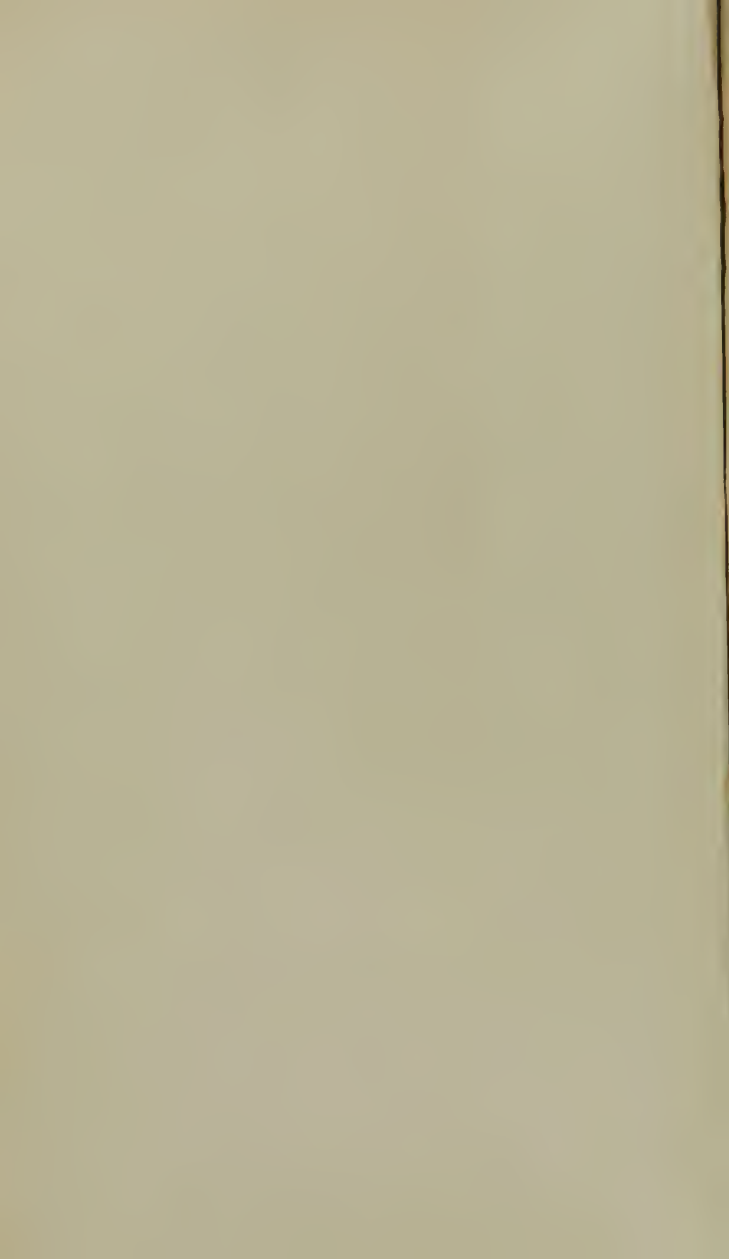


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ABERNETHY'S FAMILY PHYSICIAN;

OR,

READY PRESCRIBER

IN CASES OF ILLNESS AND ACCIDENT, WHERE MEDICAL
ATTENDANCE IS NOT DESIRED OR
CANNOT BE PROCURED.

CONTAINING

The Causes, Symptoms and Treatment of Diseases,
THE PROPER REMEDIES IN BURNS, CONTUSIONS,
POISONING, AND ALL VARIETIES OF
PHYSICAL CASUALTIES.

FORMING

A COMPLETE GUIDE
TO THE RETENTION AND RECOVERY OF HEALTH.

SECOND AMERICAN,
FROM THE THIRTIETH LONDON EDITION.

REVISED AND ENLARGED

BY H. BOSTWICK, M.D.

NEW YORK:

STRINGER & TOWNSEND.

1849.

ANNEX

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PREFACE TO THE AMERICAN EDITION.

It has frequently been questioned whether medical instructions of a general nature, for the use of unprofessional persons, were not as likely to do harm as good. And so, in regard to the imparting of religious information—many worthy persons have doubted whether the reading of the Bible should not be confined to those, who have been qualified by education to expound its mysteries.

In both these cases, the *use* has been argued against because of the *abuse*. It is far from our intention to undervalue the importance of the attendance of an intelligent physician in all instances, where a powerful medicine is to be administered. It would be an infinite task to draw up a list of prescriptions applicable to *all* varieties of cases. But it seems to us, that the usefulness of a popular manual like the present, especially in villages, or at sea, where much delay must occur before medical assistance can be procured, does not admit of a question.

Care has been taken to compare Dr. Abernethy's prescriptions with those of the best modern English and French physicians; and, in some in-

stances, alterations and additions have been made. In rendering himself intelligible to the humblest capacities, the author has been considered remarkably successful. His work is eminently a popular one. It is the most prized of all the compendiums of domestic medicine in England ; and the low price at which it is now, for the first time, afforded by the American publishers, will be likely to place it in the possession of every family in the land.

H. BOSTWICK, M. D.

504 Broadway.

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ABERNETHY'S FAMILY PHYSICIAN.

DISEASES OF THE DIGESTIVE ORGANS.

IN order to explain the diseases or derangement occurring in the organs of digestion, it will be necessary to give a brief and plain sketch of these organs and their functions in a state of health.

I.—HEALTHY STATE OF THE ORGANS OF DIGESTION.

The due digestion of food and drink is of importance from infancy till adolescence, to supply materials for the increasing growth of the body, and afterwards to make good the wear and waste continually going on in all its parts.

One proof of the wearing of the body must have been observed by every one. On combing the hair, a great number of white scales fall from the head; and in wearing black silk stockings, they are often found covered on the inside with similar scales. These scales are portions of the thin and insensible scarf-skin, which has been worn and detached from its place. In cutting

our hair and nails, we remove part of what is superfluous ; but the loss is immediately supplied again from the blood.

In all the interior parts of the body, the same process of wearing is going on as we have just exemplified in the case of the skin ; but as the scales, or the minute portions of fluid, cannot be thence removed, like the scales of the head or the sweat of the brow, a system of vessels, called by anatomists the absorbents, is contrived to act the part of scavengers, and clear the body of its waste.

These absorbents are found in all parts of the body. They run, like the veins, in the direction of the heart, uniting in a common canal, which enters the vessel that carries the digested food into the blood, where all the refuse and rubbish of the body, collected in their course, are emptied. This waste must accordingly pass into the blood ; and it is carried with it directly to the lungs, and removed by the breath and the bowels. The breath and the bowels become loaded with much impure matter, thus carried off from the blood in the lungs and the intestines.

As the fresh blood, prepared from digested food, is indispensable in supplying this wear and waste, the importance of keeping the stomach and other organs of digestion in a healthy state, will be obvious.

1. THE MOUTH AND ITS FUNCTIONS.—For the purpose of reducing our food, after it is cooked, into the form of a pulp or paste, we are provided with an apparatus more complete than those who have not examined the subject can conceive. The teeth are admirably adapted to grind the food ; and the tongue, with its flexibility

and its endless motions, to turn it in the mouth, while it is mixed with a fluid supplied in abundance from several pairs of fountains or glands in the vicinity, from which pipes or ducts are laid, and run into the mouth.

The whole surface, indeed, of the mouth and tongue as well as the other internal parts of the body, give out more or less moisture; but this is not enough for the purposes of mixture with the food in eating, without the fluid, popularly termed spittle (*saliva*), prepared by the fountain-glands.

When the food has been properly masticated, comminuted, and mixed with saliva, it is prepared for the subsequent process of digestion in the stomach; but it is most important to remark, that if it is not thoroughly mixed with the fluid in the mouth, it will be unfitted for digestion, and will probably derange the health. So indispensable is this, that serious diseases arising from indigestion, have been cured simply by ordering the food to be eaten slowly, and carefully mixed with the saliva. It is worthy of remark, that no kind of drink will supply the place of this singular fluid.

2. THE STOMACH AND ITS FUNCTIONS.—When food has been well chewed and mixed with the saliva, it is fitted for the rather complicated process of swallowing. The gullet (*œsophagus*), which conducts it to the stomach, is a flexible membranous tube, plentifully supplied with a mucous fluid; so that if the food has not been moistened sufficiently in the mouth, it may not be interrupted in its descent by being too dry, while the contracting muscles force it onwards into the inlet of the stomach so powerfully, that the process cannot be stopped when once begun, even by an effort of the will.

The fluid of the stomach is somewhat similar to the spittle of the mouth, being thin, transparent, without smell, and almost without taste. Besides its high digestive power, which sometimes acts on the stomach itself after death, it has the property of rendering, in a short time, the most tainted and putrid substances perfectly sweet. Dr. Fordyce forced dogs to eat meat which was putrid and rotten, and on killing them, a little afterwards, he found the putrescency quite corrected.

Another fact of great importance is, that the stomach is incapable of digesting food when it is diluted with water, or other similar fluids, which must all be removed before digestion can proceed.

It is necessary to remark here, that there is not a more pernicious, vulgar error, than that which ascribes rich nourishment to beef tea, mutton broth, and other strong soups; for no digestion can go on while the stomach is full of liquid.

When all unnecessary liquids are removed, the more solid parts of the food are reduced to a thick grayish paste, termed chyme, which is moved along to be passed out of the stomach into the chyle-gut, and mixed with bile and pancreatic juice, as shall now be explained.

3. THE LIVER, THE PANCREAS, AND THEIR FUNCTIONS.—Near to the stomach, below the edges of the ribs on the right side, and immediately under the great fleshy partition between the chest and the belly, termed the midriff (*diaphragm*), lies the liver, a large, solid, dark-colored gland, of a close and delicate texture. The office of the liver is to prepare bile from the blood, with which view a large canal or vein full of dark-colored blood runs into

it, but soon divides in the liver itself into innumerable branches, in the manner of a tree branching from a trunk, whose roots are placed, as Galen well remarked, in the belly.

This great bile canal issues from the lower and concave surface of the liver, and conveys the bile either immediately into the intestines below the stomach, or through another canal which joins it, into the gall-bladder, or store cistern, and long bag, or pouch, of the shape of a pear, adhering to the lower surface of the liver, where it is improved in quality, and acquires consistence, bitterness, and a deeper yellow color, by the loss of its more fluid and watery parts, which pass out through the coats of the gall-bladder.

The pancreas is a rather large gland lying under the stomach, and serves to separate from the blood a fluid named the pancreatic juice, of a mild bland nature, very similar to the spittle of the mouth. The blood runs through this in branching vessels, and the fluid separated from it goes into a number of little canals, which unite in a single large one, in form of the plumelets of a quill uniting at the stem. The pancreatic juice, being very mild, is probably intended by Providence to correct the acridness of the bile.

As soon as the digested aliment has passed the outlet of the stomach, it is received into the first intestine, which may be appropriately termed the chyle-gut. Here it meets and becomes mixed with the bile and the pancreatic fluid, which seem to act as powerful chemical agents, in beginning its conversion into new blood.

The useful parts of the aliment, termed chyle in a word, are, by these agents, chemically separated from the useless—the useful taking much the appearance of

cream, being spread over the linings of the intestines to be sucked up by the mouths of innumerable minute canals, termed lacteals, that open there; while the useless parts or excrements are thrown into the middle of the intestines as refuse, to be carried along the bowels and discharged by the vent.

4. THE INTESTINES, THE MESENTERY, AND THEIR FUNCTIONS.—The aliment remaining for a short time in the chyle-gut, and afterwards passing rapidly therefrom, leaves a space in the gut beyond rather empty, which may be termed the lank-gut, and this leads to the small intestine, distinguished by the velvet-like lining caused by the mouths of the little canals already described.

The intestines terminate in the vent (*anus*) by a short, straight, and small canal, which may be termed vent-gut (*rectum*), the outlet of which is kept shut by three muscles. The little canals termed the lacteals are so numerous all over the inner surface of the bowels, that the cream-like chyle which is missed by one set is readily caught by others, and carried along a membrane termed the mesentery. This membrane is bestudded with little glands, through which the canals pass, in their way to the blood. The caul is a large membrane hanging down over the stomach and bowels for storing up fat.

5. THE KIDNEYS AND THEIR FUNCTIONS.—The stomach, as we have seen, cannot well digest food when it is too fluid, and healthy blood ought not to be too fluid. In order, then, to remove any superfluous fluid in the stomach and in the blood, there exists in the body a contrivance similar to the by-set of a mill-stream, or the

waste pipe of a dye-work or brewery, for carrying off the fluid that is not wanted, and which might prove injurious. One portion of the superfluous fluid is carried off through the pores of the skin by perspiration; another from the lungs by breathing; but the more obvious than either of these two, is that which is carried off through the kidneys and bladder in the form of urine.

We have two kidneys for separating from the blood that passes through them the superfluous fluid and other matters which constitute urine. The blood which is thus freed from its superfluous fluids is returned to the general circulation, while the urine is carried off from the basin by a long pipe from each kidney, termed a ureter, into the bladder, to be afterwards evacuated. It is worthy of remark, that the outlet of the bladder is always kept shut by a peculiar muscle, which, when the urine accumulates, is forced to give way and permit its escape.

II.—DISORDERS OF THE ORGANS OF DIGESTION.

HAVING thus described the organs concerned in digestion, from the entrance of the food into the mouth till the useful parts are taken up by the lacteals, and the useless are ejected through the bowels, the skin, the lungs, and the bladder, we shall next consider the disorders to which these several organs are liable, beginning at the mouth.

1. TOOTHACH.—When toothach evidently arises from a decayed or hollow tooth, and the patient is unwilling to have it extracted, a bit of opium, or some cotton wool soaked in laudanum, may be plugged into the hollow

Camphor, dissolved in oil of turpentine, is also a favorite remedy, by the following solution: Put two drachms of camphor into an ounce of the oil of turpentine, and let it dissolve, when it will be fit for use.

Cajeput oil is another valuable remedy for allaying the pain when put into the hollow of the tooth. The most effectual, however, of all remedies, is the putting of a red-hot wire into the hollow, which will destroy the nerve, and prevent the return of pain.

If an external application is preferred, the following liniment may be rubbed on the outside of the jaw:

Liniment.—Take an ounce of spirit of camphor; three drachms of liquid ammonia, or hartshorn; ten drops of essential oil of bergamot: mix them in a phial for use.

If the gums are spongy or tender, and apt to bleed, the following wash, occasionally applied, will be found useful:

Wash.—Take half an ounce of tincture of myrrh; two ounces of tincture of Peruvian bark: mix them in a phial for use.

A blister placed behind the ear, or burning the lap of the ear with a cloth dipped in boiling water, will often remove the pain entirely.

2. NETTLE RASH.—This disease arises from some disorder in the stomach caused by eating fish, fruit, or something that disagrees. It readily gives way to a cool regimen, and keeping the body open with mild laxatives, as phosphate of soda, or cream of tartar.

3. INDIGESTION.—*Causes and Symptoms.*—Delicate persons, particularly females, tradesmen, accountants, or literary men much confined in-doors, and sitting most commonly in a stooping position so as to press on the stomach and bowels, will at times feel their food lie heavy, like a load, upon the stomach, and this may probably be accompanied with flatulence and belching; but the inconvenience may only be temporary, and may go off in a day or two. When these symptoms have begun to recur once a month or once a week, the com-

plaint is certainly fast forming into a state of difficult cure. The mouth becomes clammy, the tongue white or brownish; the appetite is impaired; there is considerable thirst; and the feet are apt to be cold, even when the weather is not uncomfortable. Pains in several parts of the chest, somewhat like rheumatism, are often felt, or even in the shoulders, the arms, and the loins—all depending on the derangement of digestion. The mind becomes also very fretful and irritable.

Treatment.—The first thing to attend to is early rising; that is, at five or six o'clock in summer, and never later than seven in winter, going to bed precisely at the same hour every night; having all meals precisely at the same hour every day, with no lunches between meals, and as much active exercise in the open air as can be taken without fatigue or perspiration. The more simple the diet is, and the less strong the drink is, the better.

Medicines.—All drugs are far inferior to what has just been recommended; but for those who cannot, or think they cannot, do without medicine, the first thing indispensable to be done, is to clear the stomach and bowels by an emetic.

Emetic.—Take twenty grains of ipecacuanha in powder, one grain of emetic tartar; mix in a table-spoonful of warm water: after it begins to operate, walk about before a good fire; and work it off with lukewarm camomile tea. Afterwards take the following pills:

Laxative Pills.—Take five grains of gum mastic, five grains of conserve of roses, fifteen grains of the best aloes, as much syrup of wormwood as to make a paste, which you may divide into half-a-dozen pills; one to be taken occasionally two hours before dinner or supper.

As a variety—for the bowels soon get used to a medicine when it is continued for some time—you may try the following:

Rhubarb Pills.—Take one drachm of the best powdered rhubarb, half a drachm of common syrup, five drops of oil of carraway; mix and divide into twenty pills, from one to three for a dose, according to the strength of the bowels.

If you do not like pills, or if you wish to change them for another form of medicine, try the following

Draught.—Take two drachms of the crystals of carbonate of soda, a drachm and a half of cream of tartar, five ounces of pure soft water. Let it stand in a corked bottle for three days, when it will be fit for use; a wine-glassful to be taken as the patients find occasion for it. This is best in the morning, after having taken pills the night before.

When you find yourself improving from this treatment, and are relieved in a good measure from the load and oppression of stomach, you may then begin by degrees to try a course of the following pills:

Strengthening Pills.—Take one drachm of myrrh, and rub it up with half a drachm of carbonate of soda; add half a drachm of sulphate of iron, and half a drachm of sugar. Make into a mass in a mortar, and divide into thirty pills, two to be taken thrice a day.

4. **PERVERTED APPETITE.**—In consequence of acid formed in the stomach, and other derangements, an occurrence frequently attending pregnancy, a desire is felt of eating cinders, chalk, and other substances.

Remedy.—Small doses of ipecacuanha, such as ten drops of ipecacuanha wine twice a day, in a glass of water or a cup of camomile tea, will do good.

5. **HEARTBURN.**—*Symptoms.*—The disorder termed heartburn does not affect the heart, but the stomach, with a sort of burning pain, so severe, in some cases, as to cause the eyes to water. It is caused in most cases by overloading the stomach, and rendering it a sort of brewery of vinegar; though it may arise from the powers of the stomach being too feeble to digest what is eaten.

Treatment.—When the acid depends on a mere fermentation of the food, it may in a great measure be prevented by using food not easily fermentable, such as beef and biscuit, avoiding vegetables, and taking magnesia and liquor of potass. But sometimes a patient may be tormented with acid, eat what he will; and

even though he abstain from food altogether, it will not prevent for an hour the formation of the acid, and the alkalies only procure a short respite from the burning or gnawing which it occasions. In this case may be tried a rather singular, but a very powerful remedy.

Pills.—Take thirty grains of fresh ox-gall; same quantity of assafœtida. Make into one dozen pills, and take from three to four thrice a day. Their good effects will appear in a few days.

The acid of heartburn may be neutralised by any of the alkaline earths; but it requires a continued application of such remedies, and the patient may consume a wagon-load of magnesia without being cured. The patient should therefore take the following pill:

Soda Pills.—Take half a drachm of dried carbonate of soda, same quantity of extract of gentian; beat them together, and divide into twelve pills, of which two or three may be taken twice or thrice a day.

Acids sometimes are useful, particularly nitric acid, in the dose of five drops, every three or four hours, in a glass of water. It is also important to keep the bowels open with small daily doses of epsom salts, or rhubarb pills.

6. WIND IN THE STOMACH AND BOWELS, OR FLATULENCE.—*Symptoms.*—This arises from the same causes as heartburn, which it frequently accompanies, and is very teasing and distressing.

Remedies.—Together with what has been recommended under heartburn, the following may be tried:

Draught.—Take half a drachm of tincture of castor; one drachm of aromatic spirit of hartshorn; twelve drachms of camphor mixture; and one drachm of syrup of orange-peel; mix for a draught to be taken twice a day: or take half a drachm of the liquor of carbonate of potass, an ounce of the infusion of gentian, a drachm of the tincture of cascarilla; mix for a draught, to be repeated as occasion requires.

7. COLIC, OR BELLY-ACH.—*Symptoms.*—Gripping pains

in the bowels, chiefly about the navel, accompanied with costiveness, head-ach, nausea, and often with vomiting.

Remedies.—When the symptoms are very urgent, two drops of croton oil, rubbed up with an ounce of mucilage of gum tragacanth, and sweetened with sugar, may be taken every four hours, or oftener. In slighter cases, the following

Draught.—Take six drachms of castor oil, two drachms of tincture of senna, and mix. When there is much wind, and no apparent inflammation, a glass of brandy or other spirits may be taken, or the following

Pills.—Take one drachm of compound extract of colocyath, three grains of opium, six drops of oil of nutmeg; make a mass, and divide into twelve pills, two to be taken every hour; or the following

Draught.—Take one scruple of rhubarb in powder, half a drachm of spirit of anise, one ounce of cinnamon-water, and a half or one drachm of tincture of jalap; mix, and take immediately.

8. COSTIVENESS.—*Causes and Symptoms.*—This is no less common a complaint than it is often obstinate and unmanageable. It arises chiefly from the stagnation of blood in the lower parts of the body and bowels. The symptoms are uneasy feelings of weight and obstruction, often with wind and belly-ach.

Remedies.—Whatever tends to quicken the stream of the blood, in its return to the heart, will, in such cases, relax the obstructed intestines, and promote their motion. Above all things, then, walking should seem to be useful for this purpose; riding on horseback is also good. As to diet, brown bread, eggs, very soft boiled, or beat up raw, and all sorts of vegetable food, particularly potatoes, carrots, and parsnips, and also apples and other fruits, with plenty of sugar, are good; but hard-boiled eggs, roast or salt beef, ham, tongue, fish, &c., ought to be eaten sparingly; and no drink stronger than table-beer should be taken, and chocolate, rather than tea or coffee. Butter also, and fat meat, provided always that the stomach can digest them, are useful.

Those medicines are most powerful which act either as a stimulus to the liver or the bowels; such as one blue pill every night, with half a pint of decoction of sarsaparilla every day. The bowels may also be stimulated directly by aloes, or rhubarb, or croton oil.

Pills.—Take two drachms of socotrine aloes, two drachms of gamboge, thirty drops of oil of anise, a sufficient quantity of simple syrup; mix, and make into five dozen pills; one or two to be taken at bed-time. Or, take sixteen grains of socotrine aloes, eight grains of myrrh, four grains of saffron, fifteen grains of antimonial powder, fifteen grains of guaiac, a sufficient quantity of spirit of wormwood; mix, and make into eighty-two pills, one or two for a dose. Or, take fifteen grains of Castile soap, two drops of croton oil; make into three pills, one to be taken every two hours till effectual. This should never be used till all other means have failed, as it is a very strong and irritating medicine.

Mr. Locke judiciously advises those of a costive habit to go regularly to the water-closet every day, an hour after breakfast, and make an effort, whether they succeed or not. We should advise the same to be done both morning and evening, for at least a month; we have known it succeed when all other means have failed. There is nothing better, in a costive habit, than eating two, three, or half-a-dozen good figs, between meals. When exercise cannot be had, the flesh-brush should be used morning and evening; and friction over the belly and stomach, with warm flannel or calico. The warm water enema, or lavement, now so much used, is very apt, when used to excess, to weaken the bowels; in moderation it may be tried, when other remedies fail.

9. DYSENTERY, OR BLOODY FLUX.—*Causes and Symptoms.*—This alarming disorder seems to be communicated by infection, but may be caused by cold, night air, damp, or bad diet. It begins with looseness of the belly, chilliness, loss of strength, a quick pulse, great thirst, and an inclination to vomit. When the patient goes to

stool, he feels a bearing down, as if the whole bowels were falling out. It may be distinguished from a common looseness by the acute pain of the bowels, and the blood which generally appears in the stools; and it may be distinguished from bile flux (*cholera morbus*) by its not being attended with such violent and frequent fits of vomiting.

Treatment.—Cleanliness contributes greatly to the recovery of the patient. Every thing about him should be frequently changed. His spirits must be kept up in hopes of a cure; for nothing tends more to render any putrid disease mortal than fear. The greatest attention must be paid to his diet. Apples boiled in milk, water-pap, and plain light pudding, with broth made of the gelatinous parts of animals, such as sheep's head, may be eaten. When they cannot be had, barley-water sharpened with cream of tartar may be drank, or a decoction of barley and tamarinds; two ounces of the former and one of the latter may be boiled in two quarts of water to one. Water-gruel, or water wherein hot iron has been frequently quenched, may be drank in turns.

Medicine.—At the beginning of this disease, an emetic of a scruple, or at most half a drachm of ipecacuanha, may be given; and the day after, half a drachm or two scruples of rhubarb must be taken. This dose may be repeated every other day for two or three times. Afterwards two or three grains of ipecacuanha in powder may be mixed in a table-spoonful of the syrup of poppies, and taken three times a day. If the patient be much reduced, along with enemata, or injections of starch and nourishing broth, give the following

Draught.—Take ten drachms of infusion of quassia, one drachm of tincture of columbia, and twelve drops of tincture of sesqui-chloride of iron: mix, and take at mid-day.

10. LOOSENESS, OR DIARRHŒA.—*Symptoms.*—When there are frequent stools not of a high yellow color, with no fever or bearing-down pains, it is simple loose-

ness, and is not contagious nor dangerous, unless it increase or continue so long as to weaken the patient. It often occurs on change of residence, from the nature of the water or the air.

Treatment.—It is an important caution not to stop the complaint too suddenly by astringents; but rather to aid nature by small doses of rhubarb, such as one or two of the compound rhubarb pills; or as much sulphur as will lie on a shilling, in a little honey or treacle. When it does not go off readily, try the following

Draught.—Take one ounce and a half of chalk mixture, one drachm of tincture of catechu, and fifteen drops of laudanum; to be taken every three or four hours. Or, a pint of new milk may be boiled with two drachms of alum, and the whey drank.

11. BILE FLUX, OR SIMPLE CHOLERA.—*Causes and Symptoms.*—Unusually hot sultry weather, or sudden cold or damp succeeding to heat, and checking the perspiration, and consequently the manufacture of bile, will be followed by a violent re-action, and is the most frequent cause of bile flux, a superabundance of bile being poured into the bowels, which irritates them strongly, and produces gripes, purging, and vomiting, often of pure bile. “The bile,” says Celsus, “bursts forth, both upwards and downwards; at first like water, afterwards as though fresh flesh had been washed in it.”

Treatment.—The great secret of successful treatment consists in taking care that, whilst we assist nature to expel the bile, the patient’s strength to sustain the conflict must be most carefully watched and supported. Our first object, therefore, must not be to stop the purging and vomiting, unless these are very exhausting; but to assist nature in clearing away the superfluity of the bile. All astringent and binding medicines, then, and all emetics and purgatives, are to be avoided, as tending to augment the irritation, or to spur on the liver to throw out more bile. If the evacuations be lumpy or unnatural in color, a small dose of castor oil, or any other mild laxative, may be useful, or, what is even better, a mode-

rate use of mild fluids to dilute and wash out the stomach and bowels. For this purpose, weak chicken broth; toast and water, made with oat cake toasted quite brown, and boiled in water till it is of the color of coffee; spring water with the chill taken off; or cold and fresh water from the fountain, have been given with great success. Linseed tea or barley-water, with a little gum arabic and barley-sugar in it, is also good, and better still if made with spearmint, or peppermint tea from the green leaves, fresh gathered. Solid food is seldom or never relished by patients, and ought not to be pressed upon them.

There is danger, however, in giving too much of these warm drinks, as they tend to increase the flow of the bile; and if the discharges are very violent, they ought to be entirely prohibited, and some authorities say they ought not to be given at all, except before the flux appears, and recommend opium as a specific that acts like a charm. According to this view, the following mixture may be tried:

Mixture.—Take twenty drops of laudanum, twenty grains of Epsom salts, dissolved in a sufficient quantity of peppermint-water. Mix, and repeat every two hours till relief is obtained.

In the case of much pain or sickness, when this mixture would be too fluid for the patient, the most eligible remedy for the griping and spasm is the following

Pill.—Take from one to two grains of opium, from three to five grains of chloride of mercury or calomel. Make into a pill, and follow it, if necessary, every hour afterwards, with half a grain of opium and one grain of calomel, till the vomiting and purging abate, which will generally be the case in from half an hour to three hours from the first dose.

This treatment will generally cure the patient in two or three days. Should any weakness remain troublesome after the disease has been subdued, it will be of advantage to take a few doses of the compound rhubarb pill, or the following

Draught.—Take one ounce and a half of infusion of

cascarilla, three drachms of tincture of columbia, one drachm of compound tincture of cardamums. Mix for a draught thrice a day.

12. SPASMODIC FLUX, OR MALIGNANT CHOLERA.—This disease has within the last few years spread terror and death through every country, from India in the east to Europe and America in the west; and, though it occasionally abates or disappears, it often again breaks forth among the people with fresh alarm. It is much disputed whether or not it be infectious. Most probably it is not so, and much less is it spread, as alleged, by insects; but, so far as practical caution is concerned, it is best to act as if these seeming fancies were actual facts.

Symptoms.—Malignant cholera sometimes suddenly attacks people in good health, without any notice of its approach; but the patient is usually affected with nausea, or slight irritation of the bowels, or pains and cramps in the legs; but very often there is no warning at all. On awaking out of sleep, though having gone to bed in health, the patient is all at once most violently affected with spasmodic pain in the bowels, sickness, and purging; and the pulse is hardly to be felt. A person may be well at breakfast, and may die before noon; or have been out at night, and be attacked with cholera at day-break.

In the worst cases of all, there is neither vomiting nor purging, the stomach and bowels seeming to have lost all power.

Treatment.—When it is pretty obvious that an attack has commenced, the best thing that can be done, in the first hurry, is to get some warm and comfortable drink prepared, such as hot brandy and water, which is the best of all; to place a good blanket close to the fire, until it is quite warm; to undress the patient, from head to foot, before a fire; to drink the brandy and water, whilst the feet, legs, hands, and arms, are briskly rubbed, and then to roll the hot blanket completely up to the chin. Even the head should be warmly covered up, only leaving room to breathe.

In all this there is nothing required (except the brandy) which is not to be found or which may not be managed in any house or cottage. If there is no brandy, hot tea, or even hot water, will be better than nothing, if the patient can keep it down. Along with the hot drink, whether brandy or tea, a solution of opium in spirit, that is, *laudanum*, is the best medicine for a cholera patient; the usual dose is from thirty drops to forty. In a case of cholera thirty or forty drops should be given at first in the brandy and water. If the edge of the laudanum bottle is made wet on one side, it will be easy to drop it out, drop by drop, into an empty glass; if it runs out too fast, the dropping must be done over again, until done properly, as too much might be fatal. For persons so situated as to have no means now of getting medical advice for several hours, some rules must be laid down.

In order to restore the circulation of blood in the skin, and bring back its warmth, strong rubbing of the body with the hand, or with hot coarse towels, or with equal parts of mustard and flour, or with embrocations containing camphor, such as camphor liniment; bottles of hot water, wrapped in flannel, applied to the soles of the feet, to the pit of the stomach, under the arms, and under the joints of the knees; a hot bath may be prepared (though when the strength is *much reduced* this is not safe), and the patient placed in it, and kept there a quarter of an hour, then well rubbed and dried, and placed in the hot blankets; or heat in the form of either vapor from hot water introduced under the blankets, or produced by burning spirits under the bed-clothes; or bags of hot sand, hot bran, hot oatmeal, or hot air, may all be advantageously tried.

The other remedies which have been tried are bleeding either with lancet or leeches over the stomach; calomel in the dose of twenty grains; cajeput oil in the dose of twenty drops on lump sugar; Cayenne pepper in doses of twenty grains; and ether in the dose of a tea-spoonful.

13. JAUNDICE.—*Causes.*—As cholera or bile flux is caused by a too great flow of bile into the bowels, the deficiency or stoppage of the due flow of bile produces jaundice, in which the blood, becoming loaded with the yellow bile, tinges the skin and whites of the eyes with a yellow hue, more or less deep in proportion to the obstruction. Violent passions, strong purgatives or emetics, catching cold, and the like, are apt to bring on jaundice.

Symptoms.—Jaundice begins with a feeling of excessive weariness, and great aversion to every kind of motion. The skin becomes dry, with a kind of itching or pricking pain over the whole body; the stools are of a whitish or clay color; and the urine is yellow or reddish, and dyes things dipped into it. The breathing is difficult, and there is unusual oppression of the breast, heat in the nostrils, a bitter taste in the nostrils, a bitter taste in the mouth, loathing of food, and sickness at the stomach. It has been erroneously said that objects appear to the eye of a yellow color. If the patient be young, the disease is seldom dangerous; but in old people it often proves fatal. The black jaundice is more dangerous than the yellow.

Treatment.—The diet should be cool, light, and diluting; much exercise, such as walking, running, dancing, and even jumping, are likewise proper, provided there be no pain. No medicines are more beneficial in the jaundice than vomits, especially where it is not attended with inflammation. Half a drachm of ipecacuanha in powder will be a sufficient dose for an adult, and it may be wrought off with weak camomile tea, or lukewarm water. The belly must likewise be kept open by mild purgatives, such as the following

Pills.—Take socotrine aloes and rhubarb in powder, of each two drachms, Castile soap an ounce; beat them all together, with a little syrup, into a proper consistence for pills; let them be formed into pills of an ordinary size, and five or six of them taken twice or thrice a day. They must be continued for some time, and the quantity regulated by the patient's stools, of which he ought at least to have two every day.

When the jaundice is obviously caused by the hardening or inflammation of the liver, it must be treated as directed under that head; when it is caused by gall-stones, as under:

14. GALL-STONES.—*Causes and Symptoms.*—In the gall-bladder are not uncommonly formed hard masses of bilious matter, termed gall-stones, which get into the duct or passage from the gall-bladder to the bowels, causing sharp and violent pains, which cease for a time, and then return again. Great irritation at the stomach and frequent vomiting will attend, and the patient will experience an increase of the pain after eating.

Treatment.—It will be advisable, in full habits, to take away a quantity of blood, proportionable to the state of the pulse and the severity of the pain, and then, having adopted this step, the sufferer should be put into a warm bath, till some degree of fainting is excited; then removed to the bed, and an opiate taken, which may be repeated every four or six hours till ease is procured. Lime-water and milk in equal proportions has by some been recommended to be given in doses of an ounce. A mild course of mercury will tend to prevent the formation of gall-stones.

15. WORMS.—*Causes and Sorts of Worms.*—Worms chiefly affect those who are subject to indigestion, nervous ailments, and disordered bowels, whatever be the age or sex.

Upwards of sixteen species of worms have been found in the human intestines; but three only are general,—the maw-worms or thread-worms (*Ascarides* or *Oxyuris vermicularis*), the round (*Ascaris lumbricoides*) and the tape worms, one the broad tape-worm (*Tania lata*), and the two-fanged tape-worm (*Tania Solium*).

Symptoms of Thread Worms.—The most certain sign of the thread-worm is an itching of the fundament and lower intestine, which is often distressing and almost intolerable. The disturbance produced here is communicated by the nerves to all parts of the body, occasioning

a crowd of disorders of the bowels, the stomach, and the head, such as headaches, giddiness, loss of activity, frightful dreams, &c.

Remedies.—As strong purgatives, now so fashionable and so destructive to health, such as the quack trash called worm-cakes, worm-nuts, and worm-lozenges, are all bad, the first aim must be to get rid of the slime of the bowels on which the worms feed; for, if they are deprived of their food they must inevitably die. Now it is clear that purgatives, as they make the stools more watery, only increase the slime, and of course supply the worms with more food. It will be more effectual to try the following

Mixture.—Take one ounce of good quick-lime, a pint and a half of rain water; pour the water over the lime, cover it up for an hour in a pipkin, then pour off the water into a bottle, and keep it corked for use. For a child, a wine-glassful is to be taken thrice a day, in a cup of camomile tea, or to make it more palatable, in beef-tea or other soup. Double this dose, or more, for a grown person. An over-dose will do no harm.

If this be continued for a month or six weeks, the worms will disappear, and the health and strength will be rapidly improved. It may be necessary, perhaps, to give a little Epsom salts and senna, once or twice a week, though this depends upon the state of the bowels. If the itching of the fundament is very troublesome, inject in the usual way a little of the lime-water mixed with beef-tea, which will kill every worm it touches. Even cold water will be effectual if thus injected.

Ruc, tansy, worm-seed, angelica, and all bitter herbs are good against worms, but only because they strengthen the bowels. None of them are so effectual as the above; but any of them may be taken with advantage in the form of tea, along with it. Turpentine, as directed below for tape-worm, may be tried with success in obstinate cases.

Symptoms from Round Worms.—The round worm, though by no means rare, is less common than the

thread-worm. The symptoms are not much different from those of the thread-worm preceding, except the young worms get into the stomach, when nausea, retching, and other marks of irritation, will ensue; and often nervous affections, such as convulsions and epilepsy.

Treatment.—Nearly the same remedies as recommended for thread-worms may be employed. Turpentine, as for tape-worms, is the most powerful medicine.

Symptoms of Tape-Worms.—Tape-worms, as we have said, are of two species, one without, and one with two fangs, by which they lay hold of and adhere to the intestine. Both species have been found from twenty to thirty, and even two hundred feet long. When a tape-worm exists in the bowels, it is usually accompanied with great weakness and debility, with painful and alarming cramps and spasms.

Treatment.—Very many remedies have been proposed for expelling the tape-worm from the bowels, though none of them can be relied upon as infallible. One of the most celebrated, the receipt for which was purchased at a large sum by the French government, is the following

Mixture.—Take three drachms of recent male fern-root, powdered; a table-spoonful of honey. Mix, and take in the morning—a supper of panada having been taken the night before, and the bowels been prepared by an emollient clyster. This is to be followed in two hours by the following

Bolus.—Take twelve grains of calomel, twelve grains of scammony, five grains of gamboge. Make a bolus with syrup or mucilage.

This is indeed a purgative bolus with a vengeance! and we should be very apprehensive of the life of any weakly patient who should take it. We have little doubt, however, that it will kill and dislodge any tape-worm, though the sufferer will run the hazard of inflammation of the bowels, from its violent operation. This remedy has now fallen into discredit, and probably from these very reasons. The most popular remedy for tape-worm, among medical men at present, is the rectified

oil of turpentine, which is a very powerful remedy, and ought never to be omitted in obstinate cases.

Mixture for an Infant.—Take from half a drachm to a tea-spoonful of the rectified oil of turpentine, a table-spoonful of new milk, a tea-spoonful of honey. Mix for a dose. A child twelve years old may take from three to six tea-spoonfuls of the turpentine.

Mixture for an Adult.—Take from one to two ounces of rectified oil of turpentine, an ale-glassful of pepper-mint water, two or three tea-spoonfuls of honey. Mix for a dose, to be repeated every eight hours, till it expels the tape-worm. Three or four doses are usually effectual.

16. PILES.—*Causes.*—A large portion of all the blood in the body is continually jetted by the heart to the bowels, and to the lower extremities; and unless the whole of this blood return as speedily and freely as it flowed hither, it must perforce stagnate, accumulate, and produce disorder. In the stronger parts of the body, such as the arms, this increase of blood usually gives additional strength, but in the weaker parts it is certain to overcome them, and produce inflammation and other disorders; and such is the cause of piles. A sedentary occupation, writing and the like, not only obstructs the free return of the blood from the bowels and lower extremities, but drives too much blood to the parts about the seat and fundament. Now, as the termination of the intestine called the vent-gut (*rectum*) is the weakest part in the vicinity, it is overpowered by the superabundance of blood, which either swells out the veins or bursts them. In the latter case, the blood which escapes from the veins frequently does not get through the skin, but is confined, and forms swellings: when it does get through the skin, it forms what are called the bleeding piles; and the blood lost in this way is sometimes almost incredible. Aloetic purgatives, such as most of the quack pills in vogue are composed of, cause piles for the same reason. All obstructive diseases in the liver and bowels will also prevent the return of the

blood, and give rise to piles; and hence piles are common with pregnant women; above all, costiveness; for the hardened fæces which collect and accumulate in the bowels, press upon the veins and obstruct the return of the blood. The evil is increased also by deficiency of bile.

Symptoms.—The first sign of piles is a dull, peculiar, and sometimes very distressing pain about the fundament; felt more particularly when at stool, or in case of occasional costiveness. At first, perhaps, little notice is taken of this, till the pain increases so much in severity and frequency, that it compels attention. One, or a number of little tumors of various shapes and sizes, from that of a wart, or the end of your finger, to that of an egg, now make their appearance, caused by obstructed blood swelling out the veins, or escaped from the veins, and swelling out the skin. Besides these symptoms of piles, the head is usually affected with pain and giddiness; there is nausea of the stomach, and pains in the loins.

Treatment.—Some very ignorant physicians have concluded that piles, and particularly bleeding piles, are very beneficial to health, and ought therefore to be borne with and encouraged, rather than cured. This is nonsense. The first thing to be done in the cure is to discover the cause. A hard seat will occasion more pressure than a soft one, and consequently a greater rush of blood to the parts. At intervals of leisure, lying in a recumbent posture on a sofa will aid the return of the blood. Above all, the bowels ought to be kept regularly open; but no medicine in which there is aloes ought to be taken for that purpose. Dinner pills and all quack antibilious pills are therefore improper. Where there is much costiveness, we recommend the following

Pills.—Take twenty grains of the compound rhubarb pill, thirty grains of blue pill mass, ten grains of extract of colocynth; mix, and divide into one dozen pills, one or two for a dose, at bed-time, occasionally.

If the costiveness is less obstinate, the best opening medicine which has hitherto been discovered is sulphur.

We recommend the sulphur combined as in the following

Electuary.—Take one ounce of flowers of sulphur, half an ounce of cream of tartar, a sufficient quantity of honey. Mix, and take a tea-spoonful thrice a day. It will very much improve it to add twenty drops of balsam of copaiva to every dose, according to the practice of the celebrated Dr. Cullen.

When the piles are painful and inflamed, add two or three tea-spoonfuls of laudanum to a tea-cupful of warm milk; soak a sponge with it, and apply it to the parts; or a common poultice, with a tea-spoonful of laudanum to it, will give great relief. An excellent remedy for the pain of the piles is the

Bougie.—Take a roll of cotton the thickness of the finger, a quantity of butter of chocolate, a very little spermaceti ointment. Roll the cotton in these, in form of a cone or a cylinder, and introduce it into the rectum.

In all cases where there is much hardness, inflammatory heat, and irritation, half a dozen or a dozen of leeches ought to be applied around the fundament, and followed by a common poultice. After the irritation is allayed, injections of cold water, or a weak solution of sulphate of zinc, will tend to strengthen the parts. In dangerous cases of bleeding, a few doses of the disulphate of quinine, in the quantity of three or four grains, has succeeded, when every other means had failed.

17. FISTULA.—This is caused by the piles described in the preceding article breaking, and forming sores in the vent-gut (*rectum*). It will be indispensable to keep the bowels open with mild laxatives, such as castor-oil, manna, or flowers of sulphur. It is rarely cured but by surgical treatment.

18. IMMODERATE DISCHARGE OF URINE, OR DIABETES—INCONTINENCE.—*Symptoms.*—The marks of this disease are, that the urine generally exceeds in quantity all the liquid food which the patient takes; that it is thin and pale; that there is a continual thirst, with some degree

of fever; the mouth is dry, and yet there is frequently a frothy spittle; the strength fails; the appetite decays; the flesh wastes away, and the sufferer is reduced to skin and bones.

Treatment.—Everything that stimulates must be avoided; solid food should be chiefly taken—such as rice, sago, and salep, with milk; of animal substances, shell-fish are to be preferred. If the sufferer be not too much weakened by the disease, gentle purges of rhubarb, with cardamom-seeds infused in wine, may be taken in such quantity as to keep the belly gently open. The sufferer must next have recourse to astringents and corroborants. Half a drachm of powder made of burnt alum, and the gum called dragon's blood, may be taken four times a day, or oftener, if the stomach will bear it. The alum must first be melted in a crucible; afterwards they may be both pounded together. Along with every dose of this powder, take a tea-cupful of the tincture of roses.

Incontinence of urine (a disease distinct from diabetes) may be mitigated by the use of astringent and strengthening medicines. It is difficult to cure.

19. GRAVEL AND SAND IN THE URINE.—*Causes and Symptoms.*—Weak or disordered digestion, from sedentary occupation, is most frequently the cause of gravel and sand in the urine, which seems to be formed in the kidneys, passing thence with the urine along the urinary canals, termed *ureters*, into the bladder. Now, when the gravel is, as usual, full of sharp angles, it must fret and cut the tender inner surface of these canals, occasion great pain in the loins, where the canals lie, and must often draw blood, and consequently produce bloody urine. The irritation thus produced commonly extends to the stomach, causing nausea, sickness, and vomiting, and to the head, inducing headach and giddiness; and the two organs thus wage alternate war with one another, till the poor sufferer has his life dreadfully embittered. This is the common progress of repeated fits of the gravel, as they are called. If the sand or gravel is

of a white color, it is chiefly composed of lime; if red, it is an acid usually in a chrystallised state, whether it incrust the sides of the *pot-de-chambre* with a red sediment, or be passed in grains with sharp angles. It is of the utmost importance to distinguish those two sorts, the white and the red, as they require very opposite treatment. The white is neither so common nor so obstinate as the red. The red, being itself an acid, obviously arises from too much acid in the body, caused by drinking wines, spirits, and malt liquors; and by making a long interval between breakfast and dinner, and then overloading the stomach beyond what it can digest.

Remedies for White Gravel.—For the white gravel, calcareous sand, or lime, acids must be taken; and for this purpose may be tried the following

Draught.—Take one tea-spoonful of lemon-juice, an ale-glassful of decoction of pareira; sugar and peppermint-water to taste. Mix for a dose, to be frequently repeated.

In order to be satisfied with the efficacy of this remedy, pour some of it on the white gravel, and it will quickly dissolve.

Remedies for Red-Gravel.—We recommend for the red gravel a rigid abstinence from acid food and drink, such as sour fruits, cider, and champaign; and, as a medicine, magnesia, in the dose of a tea-spoonful night and morning. We are of opinion, however, that a more powerful medicine than the magnesia will be found in the following

Mixture.—Take two ounces of pennyroyal or cinnamon-water, two ounces of gum-arabic mucilage, an ounce and a half of clarified honey, three drachms of liquor of potass, forty drops of wine of opium; mix, and take two table-spoonfuls twice a day in a cup of barley-water. There may be added to each dose, with great advantage, two tea-spoonfuls of the compound spirit of juniper, or twenty grains of nitre.

If this is found to irritate the stomach too much, try magnesia, or a steady course of good soda-water, at the

rate of at least two bottles a-day. If this be too expensive, try the following

Pills.—Take six grains of dried sesquicarbonate of soda, four grains of hard soap, and a sufficient quantity of calumba-root in powder, to make two pills, one to be taken night and morning, for some weeks. These may be usefully varied by using carbonised potass for the soda, and extract of uva ursi for the calumba.

When a fit of the gravel makes its attack with violent pain, the warm bath must be immediately procur'd; and, if that do not relieve, some blood may be taken from the arm, and forty drops of tincture of opium given, with plenty of gruel or barley-water. Fomentations also, applied to the loins by a thick flannel roller, and that confined by a linen or calico one above it, will, in most cases, give instant ease.

20. STOPPAGE OF URINE, AND STONE IN THE BLADDER.—

Causes and Symptoms.—The urine may be stopped in the bladder by various causes; such as a piece of gravel larger than those just described, and termed a stone, which may be even as large or larger than a nut. Obstinate costiveness may also stop the urine by the pressure of the hard contents of the vent-gut on the bladder; and the same may also arise from palsy of the neck of the bladder. In all those cases there is excruciating pain, which can only be relieved by the discharge of the urine.

Remedies.—In extreme pain, it may be partially alleviated by the warm bath; but the most effectual relief is given by drawing off the water with a catheter.

B.—DISEASES OF THE ORGANS OF BREATHING.

IN order to explain the diseases or derangement occurring in the organs of breathing, it will be necessary to give a brief and plain sketch of these organs and their functions in a state of health.

I.—HEALTHY STATE OF THE ORGANS OF BREATHING.

We have already seen (page 13) that the digested food, in a form similar to cream, is carried from the intestines along the mesentery, or webb, in innumerable little canals, which we shall now follow in their course, till they meet in one common canal, and empty their contents, which have received a slight tinge of red in their passage, into one common reservoir, about the size of a pea, situated near the back-bone below the edge of the midriff. The prepared aliment is in this manner introduced in small quantities into the blood of one of the veins, where it loses its white tinge, and is carried forward to be farther prepared in the lungs.

1. THE LUNGS.—The lungs, which fill a great portion of the chest, are composed of a soft, spongy, elastic substance, produced by a mass of small cells or vesicles, similar to the cells of a sponge. On the walls of these cells are innumerable minute branches of blood-vessels, closely interwoven, and separated from the cavity of the cell by a membrane less than the one hundredth of an

inch in thickness, and pervious, if not to the air, at least to a portion of its constituents, when introduced into the cells by the air-tubes which run into them from the windpipe, and which, before coming to the cells, branch off from the main windpipe, and from each other, like the branches and twigs of a tree. The windpipe itself lies in front of the gullet, commencing at the back part of the mouth ; and is not composed, like the gullet, of soft yielding membrane, which might allow it to be closed by external pressure ; but constructed of stiff gristly rings, united by membrane, which permits of slight extension. The gristly portion disappears in the more minute branches, each of which ends in a single bulb, much more numerous in young than in old animals, as they become filled up by disease, and also as age advances—and hence the oppressed breathing of old people.

2. THE CHEST.—The chest, where the lungs, with the heart, are situated, is separated from the belly, containing the stomach, liver, and intestines, by a broad muscular partition, called the midriff, which has passages, however, for the gullet and blood-vessels. The midriff, when depressed, acts similarly to the sucker of a pump, or rather the valve of a pair of bellows, drawing in air from the mouth through the windpipe, to distend the lungs ; the dimensions of the chest being by the same means enlarged. When the depressed midriff again is raised up, the air in the cells of the lungs is forced out, in a similar way to water being forced out of a sponge when it is squeezed.

The chief agents in the process of breathing are the

midriff and the ribs, together with the windpipe and lungs, already described.

3. THE NOSTRILS AND WINDPIPE.—The air is introduced into the lungs partly through the mouth, but chiefly through the nostrils, consisting of two channels outwardly; but these unite into one near the back part of the mouth, where it opens immediately over the entrance into the windpipe. Contrary to vulgar opinion, the nostrils are quite cut off from all communication with the brain, by a partition of bone as thick as the board of a book, while they are partially separated from the mouth by a curtain of a thick fleshy and glandular skin or membrane, which is partly stretched, and partly hangs down, at the back part of the mouth. To this curtain is hung a little weight, of the form of a grape, which may be seen on opening the mouth pretty widely. It seems to be designed to guard the back part of the throat, and make the curtain hang steadily. The little weight, when inflamed by cold, hangs lower down, obstructs swallowing, and is in such cases well known by the name of the *pap* in the throat. The fleshy partition or curtain is pressed back by the morsel in the act of swallowing, and covers the hind part of the nostril. Sometimes, however, particles of food get up behind the curtain into the nostril, and occasion sneezing.

II.—DISORDERS OF THE ORGANS OF BREATHING.

Having thus described the organs of breathing, from the mouth, nostrils and windpipe, to the lungs, the midriff and the ribs, which are put in motion each breath

we draw, we shall next consider the disorders to which these organs are liable, beginning with the nostrils and the parts immediately connected with them.

1. COLD IN THE HEAD.—*Causes and Symptoms.*—The nostrils are lined with fine, delicate, and easily-irritated skin, like that which lines the inside of the cheeks. In consequence of the contraction of the blood-vessels of the feet, or of any other part of the body, by the application of cold, the superabundant blood, which cannot find a passage where it was wont to flow, is thrown upon the weakest or most sensitive organ of the body, into which it can most easily push its unwelcome way. In the case of a cold in the head, the superabundant deluge of blood is thrown into the lining of the nostril, swelling the parts and narrowing the passage, and, of course, causing a difficulty of breathing, and a painful feeling of distension or bursting, which extends over the forehead, and causes severe headach—all from the extra quantity of blood pushed into the blood-vessels. The same lining of delicate skin goes up from the nostrils into the hollow in the bone of each eyebrow, and back to the internal ear and upper part of the throat; and the deluge of blood, driven thither by cold, spreads along the membrane like water through blotting-paper, and the ears are involved in the pain, while the throat becomes raw and sore, and the voice rough, husky, and hoarse. This is the first stage of inflammation.

The mucus by which the nostril is moistened in a state of health is all filtered from the blood; but the swelling, produced by the overflow of blood, at first presses upon these canals, and obstructs them, and hence, at the beginning of a cold in the head, the nostril is usually drier than natural; or, from the smaller bore of the canals, allows only thin watery matter to pass; but in a short time the little canals exert themselves to overcome the pressure of the surrounding blood-vessels; and the instant they are successful in regaining their proper width, a quantity of mucus flows into the nostril, proportioned

to the increase of the blood from which it is filtered. Every person who has ever been affected with a cold can witness to the truth of this history.

Remedies.—The sooner the increased tide of blood can be drawn from the nostrils, forehead and throat, the more powerfully will be prevented the cold from *sitting down*, as it is called; that is, establishing the inflammation, and the swelling of the blood-vessels, which after a space will not, even by the withdrawal of the blood, return to their healthy calibre. This may be accomplished in three ways; either the accumulated blood may be drawn off by leeches, a dozen or so, applied to the forehead and roots of the nostrils, or driven downwards, by applying cold water to the face and forehead, and plunging the feet in warm water, into which a handful of mustard has been thrown. The cold water makes the blood-vessels contract, and the warm water to the feet makes the blood-vessels there expand, to receive what has been withdrawn from the head. The third way is to take brandy, whiskey, wine, or other liquor, hot, which in the first stage will so increase the tide of the blood, as to force open the obstructed vessels. This last remedy, after the first two days of disorder, will do more harm than good.

When the throat and ears are much affected, it is best to draw off the blood to the outer skin, by wrapping up the throat in warm flannel by day, and at night wearing a woollen night-cap, with a lamb's wool or fleecy hosiery stocking wrapped round the throat, and pinned to the night-cap; but it is necessary that it be done the very first night the cold is felt coming on; because, by delay, the disease gets too powerful for this simple remedy.

When a cold is once established, it will, in spite of remedies, run a course of about ten days or a fortnight, and will then usually subside, whether remedies be used or not,—a circumstance which often gives the credit to particular medicines for a cure which is in truth due to nature.

2. **LOSS OF VOICE.**—The consequence of a cold spreading from the head to the top of the throat sometimes produces the very distressing though not dangerous complaint of loss of voice.

Remedies.—Stimulant substances, or a mixture of two scruples of saltpetre with an ounce of the rob of elderberries : a tea-spoonful allowed to dissolve in the mouth four or five times a day may be tried.

3. **COUGH.**—It is of great importance to ascertain the cause and the seat of a cough ; for otherwise the cure is out of the question, unless it be stumbled upon by accident. What is a cough ? it may be asked. We answer, that it is an effort of the lungs, the windpipe, or the midriff, to throw off some offensive matter, or to relieve some irritation ; in the same way as sneezing is an effort to expel snuff from the nostrils, or to get rid of too much blood driven thither in consequence of a cold.

4. **STOMACH AND LIVER COUGHS.**—*Causes.*—The midriff or diaphragm, that is, the broad fleshy partition which separates the lungs and the heart from the liver and the stomach, and which moves upwards and downwards every time we breathe, is always in every case one of the chief agents in producing cough. When we consider, therefore, how many disorders of the stomach and liver there are which would cause this irritation, we cannot be surprised at the frequency of stomach and liver coughs, nor at their being often mistaken, even by those who ought to know better, for consumptive and asthmatic coughs ; and patients have accordingly been thrown into dangerous, though groundless, alarm. One of the most common causes of stomach cough is indigestion. The remedies for this sort of stomach cough are the same as those we have recommended for nervous indigestion ; for, as soon as this is cured, the cough will, to a certainty, disappear.

Another and no less troublesome variety of stomach cough arises when the lower portion of the stomach feels tender, sore, or painful to the touch, when the fin-

ger is pressed upon the part, which is a spot about the size of a shilling, at the bend of the ribs, on the right side.

Distinguishing Signs.—Medical men, in order to discover the cause of dry cough, make the sufferer draw in a very full breath, and observe minutely whether it excites cough or pain in any part. If this pain be seated in the lungs, the cough is then determined to be consumptive or catarrhal; but if it produce a sharp pain under the ribs on the right side, extending towards the back or across by the stomach, then it is determined that the liver or stomach is diseased. In coughs arising primarily from the lungs, the skin is generally clear and well colored; whereas, when the liver or stomach is affected, or where there is bilious derangement, the skin is harsh and dry, and almost always more or less tinged with yellow. In liver or stomach cough, the breathing, though hurried in the evening, on account of the accession of fever and the accumulation of phlegm, is generally calm and natural in the morning, which is not the case in consumption. The stools also in consumption are usually healthy, whilst in liver complaints they are uniformly unnatural in consistence, color, or smell.

Remedies.—As this sort of cough is only a symptom of disordered liver or stomach, we must refer for the mode of cure to those complaints. For immediate relief of the cough, if it is hacking and troublesome, nothing will be more effectual than the warm bath, or the following

Pill.—Take one grain of opium, three grains of chloride of mercury, one grain of extract of rhubarb. Make a pill, to be taken on going to bed, and follow it in the morning with a cup of senna tea. Leeches or a blister will sometimes prove almost immediately effectual in removing the cough. In addition, we should insist strongly on an issue or perpetual blister over the painful part; or, if that is inconvenient or disliked, try the following

Plaster.—Take four ounces of Burgundy pitch plaster, half a drachm of euphorbium, a sufficient quantity of

common turpentine. Melt the Burgundy pitch plaster, add the euphorbium in fine powder, and, by means of the turpentine, make the whole into a proper thickness for spreading on leather.

5. WINTER COUGH.—*Causes.*—Sneezing will explain winter cough on the same principle as we have already explained stomach and liver coughs. There is another sort of cough, arising from a different cause, which may also be explained by sneezing. When the nostrils are very dry, or when they are inflamed, as in the instance of a common cold, sneezing is excited by the irritation, when there is really nothing to get rid of. The very same is the case in coughing; for if the throat or the lungs become too dry, or are inflamed in consequence of a cold, or any other cause, they will cause the midriff to assist them in coughing, the same as if there was really a quantity of phlegm to be expelled. As there is none, the cough of course only increases the irritation, and will continue either till the strength be exhausted, or till something is done to blunt or lull the feeling of the nerves. This explains what is termed a dry cough.

Treatment.—As it is easier to prevent or alleviate than to cure this complaint, whether it be a spitting or a dry cough, we must begin by attending to the diet and regimen of the patient.

The food, both at breakfast and dinner, should be chiefly solid animal food, of the lightest sort, such as good mutton, roasted or in chops, veal, fowl, &c., with biscuit instead of bread. New bread, in particular, is extremely improper; and even stale bread, in many constitutions, is liable to ferment on the stomach, and give rise to flatulence and eructations. Strong liquors and all such as become easily acid on the stomach should be avoided. All liquid substances should be used sparingly.

The exercise most beneficial is moderate walking or riding. The dress should be regulated, as in all invalid cases, by the state of the weather. Cold changeable weather, with east and north-east winds, must be carefully guarded against by silk and woollen clothing. In

winter, many recommend flannel to be worn next the skin; but we cannot admit this as a general rule: at the same time we admit that there are cases in which the continued irritation of flannel on the skin may be advantageous, on the same principle that perpetual issues are often requisite to ward off diseases. If the cough is so troublesome as to require immediate relief, some anodyne medicine may be taken, but as sparingly as may be, for all such often aggravate the causes, though they relieve the symptoms. The following may be tried:

Drops.—Dissolve sixteen grains of acetate of morphia in one drachm of spirits of wine, four drops of acetic acid, and one ounce of distilled water; add from ten to twenty drops, taken in a cup of coffee, as strong as it can be made—will often relieve the cough, and give almost immediate ease, if it be not inflammatory.

6. ASTHMA.—*Causes.*—The causes of asthma are very nearly the same as those of winter cough, and the chief difference of the disorder is that asthma is more violent, and comes on in fits.

Symptoms.—A fit of asthma is always ushered in by weariness, languor, and a disinclination to motion, with wind in the bowels, loss of appetite, oppression of the stomach, sickness, nausea, a weight over the eyes, headach, &c. These are the immediate forewarnings of an approaching fit, which usually makes its attack about the middle of the same night, or the night following the above symptoms, when the sleep is deepest; it may also occur during the day, but this is not so common.

The patient's first sensation is a feeling of straitness of the chest, as if it were forcibly and distressingly bound with cords, which forces him to sit up erect, and to struggle for breath, as if he were upon the point of death from suffocation.

The struggle for breath affects the stomach, which becomes faint and often throws up a greenish-yellow froth or slime, produced by the agitation, while a

sweat breaks out about the forehead and neck. The efforts to speak or to bring up phlegm during the fit are very distressing. The relief is almost always in proportion to the quantity of phlegm expectorated. But though the fit usually subsides in a few hours, the tightness of the chest and the difficulty of breathing continue, and even on the second or third day the patient cannot move without great uneasiness.

Marks of Danger.—The appearance of a fit of asthma gives the alarm of fatal danger ; but it is seldom rapidly fatal, and may haunt the unfortunate patient to an advanced old age ; though the frequent return of the fit may lay the foundation of gout, water in the chest, dropsy, apoplexy, consumption, and inflammation of the lungs. When the fit is about to prove fatal, the face and lips become livid, or pale and swollen ; the hands and arms also swell, with a loss of feeling bordering on palsy. The legs become dropsical ; and suffocation from inability to continue the struggle to get up the phlegm closes the scene.

Treatment.—Cold and damp air, particularly in those who are full of blood, and at the same time, of comparatively weak constitution, ought to be most carefully avoided. Those who inherit asthma from their parents ought to be particularly careful of their dress and of their living. It very often arises from indigestion and bile, in consequence of the flatulence thereby produced pressing upwards and diminishing the capacity of the chest. For a similar reason corpulence is a frequent cause of asthma.

As medicines for immediate relief the following may be tried.

Mixture.—Take half an ounce of squill vinegar ; an ounce of spirit of nitric ether ; an ounce of oxymel ; six ounces of peppermint-water ; one drachm of tincture of foxglove ; and one drachm of laudanum ; mix, and let a table-spoonful be taken three or four times a-day.

Draught.—Take twenty drops of compound tincture of benzoin ; with equal quantities of milk of almonds and milk of ammonia, and enough of mucilage of gum

arabic to make a draught, to be taken every four hours when the expectoration is in great quantity.

7. CONVULSIVE ASTHMA.—*Symptoms.*—The chief difference of this from the preceding consists in the fit being more sudden and of shorter duration, while the cough is but slight and the expectoration scanty.

Treatment.—Blood-letting under the advice of a medical man (not otherwise) is often useful. The following may be tried by way of alleviation.

Draught.—Take thirty drops of rectified ether; ten drops of laudanum; twelve drachms of camphor mixture; and one drachm of syrup of saffron; mix for a draught every six hours.

Pills.—Take three grains of extract of henbane; four grains of extract of hemlock; make two pills, to be taken every six hours with the common saline draught.

8. CONSUMPTION OF THE LUNGS.—*Causes.*—As to the chief cause of consumption of the lungs, a disease which carries off about one-sixth, some say one-fourth of the population of this country,—hereditary predisposition seems to be the principal, but how this operates in gradually destroying the substance of the lungs is not understood. It is only known that little whitish cheesy-like tubercles, from the size of a small pin's head to that of a pea, begin to form during a cold, and afterwards burst and form incurable ulcers or sores, that gradually enlarge.

Consumptive Age.—On the average of numerous cases, it appears that, of those who die of consumption, about a third are under fifteen; about a fourth between fifteen and thirty; above thirty more than a half; and above forty, about a third; the greater number of fatal cases beyond forty occurring among the poor, and between fifteen and thirty among the middle and upper ranks.

Marks of Consumption just beginning.—The first feelings of the sufferer are very slight, but on that account, the more insidious. Perhaps the earliest of the

symptoms, even before the lungs are the least affected, and before there is any cough, is an unusually clear pearly lustre in the white of the eye, and more particularly in the teeth, while the skin also becomes more clear and delicate, and the fingers become more slender between the joints. The sufferer is, when thus affected, continually catching fresh colds from no apparent cause; and if care is taken, at this stage of consumption, to avoid or ward off these slight colds and coughs, which so often recur, it may be prevented from advancing. It is, indeed, a strong mark of beginning consumption when the patient is very liable to colds.

Marks of Consumption begun.—When the lungs begin to be affected, the first feeling of the sufferer is unusual languor and disinclination to move; while the breath is drawn with less ease, and more shortly and hurriedly than formerly. This is often not perceived, unless in going up a stair or rising ground, or on walking briskly, or on using any exertion of the body. Still there may be no cough, and the pulse may be quite natural, but easily excited beyond this by quick walking, exertion, or drinking beer, wine or spirits, which have little effect on the pulse of a strong healthy person.

The next symptom is cough, which is at first very trifling, and not nearly so troublesome as that from a common cold, and is seldom complained of, though the weakness and languor of the body become distressing. The cough is short and dry, and drowsiness, giddiness, and headache are experienced. If the cough excites vomiting or retching, it is a still more certain mark of begun consumption. Still nothing is spit up, or, if anything, only a kind of frothy mucus, not from the lungs, but from the top of the throat and back part of the mouth. If this taste saltish it is an unfavorable sign. Sometimes there will appear in it a streak of blood, or a small clot of blood like a pin's head. These particles of blood are often so small as to escape observation for weeks together. What is spit up should, therefore, be examined with a magnifying glass.

The symptoms still increasing, there is a feeling of

oppression or straitness about the chest and lungs, and usually, though not always, a sharp pain in the breast or side, which, on drawing in a full breath, is increased—catches the breath, as it is usually expressed, and instantly excites the cough. This pain, or, when there is no pain, the uneasiness in the chest, is usually worse or lying down. The spirits now become low, the countenance sad, the appetite impaired, the tongue usually white, and there is generally considerable heat and thirst, the face flushes after eating, and the palms of the hands burn.

This may be called the first and more hopeful stage of the disease, though the symptoms in the last paragraph are much less manageable, and more alarming than any of the preceding.

Marks of confirmed Consumption.—The disease now assumes its genuine aspect. The flesh gradually wastes away, and the skin, teeth, and the whites of the eyes become more and more pure and pearly; while the cheek

—assumes the rose's bloom,
The hue that haunts it to the tomb.

The sad dejected look of the countenance of the first stage now brightens into a sepulchral smile, and the deluded patient will tell you that he is “getting better every day—rapidly gaining strength—and growing fat again;” nay, he even seems very anxious to confirm you in this, and is jealously afraid lest you should doubt his word. This fatal deception is strengthened by the return of the appetite and the clean tongue, which often continue until death. The pulse and cough increase in frequency, and what is spit up is different in different cases, either watery like whey, with occasional streaks of blood, or livid, deep black, light brown, or light green; in form, either flattened or round; in consistence, either hard or soft; in odor, either fetid or without smell. The oppression of the chest, from being occasional, becomes now a constant weight; the patient can only lie with ease on the side affected; and his breathing is often accompanied with a ticking like that of a

watch. The nose becomes sharp, the eyes sink, the body shrinks, the back-bone projects, and the shoulder-blades stand out like the wings of a bird. Such is the usual train of symptoms that precede the third and fatal stage, which, on an average, proves fatal in about nine months from the first alarm; although in some cases, it is more speedily fatal, and in others it may continue for several years.

Marks of Danger.—As it is of great importance, in so insidious a disease, to be certain of its nature, several tests have been proposed, to distinguish between ordinary phlegm or mucus, and genuine pus; that is to say, matter from an ulcer of the lungs, as spit up after coughing, in colds, coughs and consumption. If merely phlegm or mucus is spit up, the hope of safety is greater; if pus, that is, the matter of an ulcer, it is, to say the least, a strong reason of alarm. To decide this question, an intelligent physician should always be called in, or much unnecessary alarm may be produced.

Preventives.—As this disease, when it advances to a certain stage, is incurable, it becomes important to use every means to ward off its approach, particularly in those who have the marks already described. Sudden changes in temperature, especially when the body is heated, should be guarded against by avoiding currents of air, and by covering. Young persons with such habits should also be led to adopt early hours, both for retiring to rest, and of rising in the morning; to take daily exercise; and their diet should be of a mild, but nutritious and invigorating quality.

Early Treatment.—If, in spite of precautions to guard against cold, and to attend to diet, the disease makes its attack, the appearance of the first symptoms should be the signal for alarm; for, but too often, it runs on to the second stage, and becomes established before it is even suspected.

When there is first observed an oppressive languor and listlessness, and particularly a feebleness on going up a stair or rising ground, accompanied with the pearly lustre of the teeth and of the white of the eyes, then is

the time to be on the alert, and to stop short if possible, the ambuscading march of this fatal disease. We cannot too strongly urge patients, who are in this state, to shun quackery, in all its forms of balms, balsams, and lozenges; for much more will depend on themselves, and on their friends, than on medicines, particularly in this dangerous form.

We should recommend that the diet should be mild, and ought chiefly to consist of milk and well-boiled vegetables, or farinaceous matters, such as sago, arrow-root, and the preparations of Iceland liverwort, from which the greater part of the bitter principle has been extracted. So far as meat is concerned, the diet should be chiefly confined to the white meats, such as rabbit, chicken, and veal; avoiding beef, mutton, pork, and all fat, salted, and high-seasoned meat; because the white meats supply less blood than the red, and have therefore, less chance to stir up inflammation, which always arises from an overflow of blood in the part inflamed. Salted and high-seasoned meats, again, are too stimulant; and fat or butter is also apt to derange the stomach. Greens and watery vegetables are also bad. Wheat, rice, and potatoes, are better. Biscuit is better than bread.

When ass's milk can be obtained, it is to be preferred to every other kind of milk; but if this cannot be readily procured, a good substitute for it is an admixture of soda water and hot cow's milk, moderately sweetened. The periods of taking food should not be so distant as in a state of health; but the quantity taken at one time should not be oppressive to the stomach. As the disease advances, and the debility increases, the diet is required to be of a more generous kind; and, in this stage, beef-steaks, porter, and gymnastic exercises, may in some cases prove serviceable.

The atmosphere, in which a consumptive person resides, should, in all the stages of the disease, be mild, dry, and equable, in respect to temperature; and if this cannot be secured in the country of his residence, it should either be sought for *early* abroad, or produced ar-

tificially at home. The exercise of the consumptive should be moderate and regular; and be taken in the morning, when the strength is most capable of being exerted without exhaustion. Carriage exercise, riding on horseback, sailing, and swinging, are the kinds of exercise best adapted to the consumptive.

To draw the Disease off from the Lungs.—In order to draw the disease off from the lungs, first attend to the skin, and get the disease (to speak popularly) to the outside as soon as possible, by bringing the infected blood to the surface. Blistering is the most violent means for this purpose; but it is not perhaps in all cases more powerful than constant and long-continued friction with the flesh-brush, and bathing the whole body with warm vinegar, at least twice a day. This, if properly persevered in, will draw a surplus of blood to the skin, and will, of course, prevent it from accumulating in the lungs, and thus causing inflammation and cough; or, if need be, the blister may be tried along with these; or a warm plaster on the breast. Dr. Combe strongly recommends sea-sickness for this purpose. A sea voyage is consequently often wonderfully efficacious in these cases.

The next channel by which the surplus blood may be drawn off from the lungs is the bowels. A dose, for example, of Epsom salts and senna, will stimulate the inner coatings of the intestines, in the same way as the flesh-brush, or the warm vinegar, stimulates the skin. An increased stream of blood will consequently flow to the bowels, and will throw off parts of its water in the same way as it does in perspirations by the skin. The stools will, of course, become more liquid and copious, and the blood will be partly diminished in quantity, and partly enriched in quality, by this loss of its water, carried off by stool. Violent purgatives, however, must be avoided, as the general strength will be much injured by them, and the disease will be accelerated.

For this reason we strongly deprecate bleeding from the arm in a beginning consumption, unless under peculiar circumstances. A large proportion of those who

die of consumption have, by the lancet, at the beginning of the disease, been weakened, beyond the chance of recovery, by draining their best blood, the loss of which relieves the lungs for a time; but which their powers of digestion must be unable to replace, when it is again wanted to support their sinking strength.

This caution, however, applies less strongly to the loss of blood by leeches; for two or three dozen leeches on the chest must empty many of the vessels in the vicinity, which will naturally shrink, and contract their diameter; and they may probably remain so.

To ward off or relieve the Cough.—When there is expectoration with a consumptive cough, the cough is caused, as we have already shown, by the phlegm accumulating in the lungs, and producing irritation. The natural anxiety to clear the throat and lungs from all obstruction, in order that the pure air may reach and purify the blood, gives rise to repeated efforts to throw off this phlegm—and such efforts are made by coughing. Now, in whatever proportion we can remove this phlegm, we shall in the same proportion diminish or relieve the cough,—an object of great importance, even when the disease is quite incurable. Unfortunately we have no means of acting directly on the lungs, as we have of acting on the stomach, or the process might be easy. The purpose, indeed, can be aided a little by inhaling the steam of water, which will dilute the phlegm, and render its expulsion more easy; but the effect in this way cannot be great. We must, therefore, have recourse to indirect means; by far the most powerful of which is the rather unfashionable prescription of an emetic. Those who have felt the harassing of a consumptive or catarrhal cough—which exhausts the strength, deranges the stomach, and often brings on severe headache, to say nothing of its threatening to prove fatal—will easily be persuaded to make trial of the following

Emetic.—Take from twelve to twenty grains of ipecacuanha in powder, a table-spoonful of the infusion of camomile flowers; mix, and take immediately, any time

between five and seven o'clock in the morning, in bed. This dose may be diminished or increased, according to its effects; one, or, at most, two operations will be sufficient. The operation will, in most cases, be over within the hour; after which the patient should take a short sleep; and, on awaking, may have breakfast in bed; and afterwards, if able, may rise and take his morning exercise. The effect should be to prevent, or greatly relieve, the cough during the day; but, if this again prove troublesome at night, the emetic should be repeated an hour before bed-time, in the same quantity as in the morning.

It will always be important to avoid all inflammatory food, violent exercise, and too warm clothing; to apply two dozen leeches over the chest, and, as soon as the bleeding is over, to put a blister over the part; to be repeated as often as it is found necessary. One of the mildest and least inflammatory articles of diet for the consumptive is milk, and its several preparations, provided always that it be used judiciously; for milk may be taken improperly, so as by deranging the stomach, to aggravate rather than do good to the disease.

Women's milk is the lightest, and next that of asses; and if neither can be had, the milk of goats, ewes, or cows.

When the milk of cows is used, it should always be allowed to stand till the cream can be removed; or, when drunk warm from the cow, that which is first drawn from the udder is the best, as it contains least cream; for this is always hurtful. Butter-milk has been found excellent in the first stages of consumption, when drunk fresh and in some quantity. If it disagree, it may be taken at first in small, and afterwards in increased quantities.

9. HOOPING-COUGH.—The danger of whooping-cough is always greater, the younger the patient happens to be. It is also more dangerous in weakly children than in the robust. When there is much feverish heat and difficulty of breathing, with little discharge of phlegm

after the fit, and when the fit exhausts the patient much, and leaves him breathless or fatigued, it is a bad sign, and danger may be apprehended. When death is approaching, the feet are observed to swell. When the hands and feet are not chilly, the skin comfortable, warm and moist, the bowels open, the urine copious, easy and abundant expectoration, and free vomiting, or moderate bleeding from the nose, at the end of the fit, the patient may be said to be in a favorable state.

Treatment.—It may be important to remark, that as the disease is very uncertain in its termination, the cure effected by nature is by the ignorant too frequently attributed to some quack nostrum. Roche's embrocation is the most extensively used of all the whooping-cough nostrums; but, though safe, it has but small efficacy, and can do little good beyond making the skin somewhat red; and that can be done much easier with a little scraped horseradish, or table-mustard, spread on the chest, and left on for fifteen or twenty minutes. The following is the mode of making the nostrum.

Roche's Embrocation.—Take one ounce of oil of amber, two ounces of olive oil; mix, and scent it strongly with oil of cloves; keep in a phial for use. It may be rubbed on the chest, in any quantity, twice or thrice a day.

10. CROUP, OR CLOSING.—*Symptoms.*—Croup is an inflammation of the windpipe, and happens only to children. It is marked by the child's breathing being longer than natural, and accompanied by a particular wheezing sound; a sharp ringing or barking noise also distinguishes the cough attendant on this affection.

Treatment.—In this disease the life of the child depends on immediately obtaining the best possible aid; since, most probably, it will otherwise perish in a very few days. If the attendance of a medical man is unavoidably delayed, and the disease is plainly marked, apply from two to four leeches over the chest, and a blister to each side of the neck, and give the wine of ipecacuana, a little until it vomits.

C.—DISEASES OF THE BLOOD.

In order to explain the diseases or derangement occurring in the blood, and the vessels which carry it, we must endeavor to give a brief and plain sketch of its circulation, and its uses, in a state of health.

I—HEALTHY STATE OF THE ORGANS OF CIRCULATION.

We have already shown above, (page 13,) that the aliment, separated from the digested food by the agency of the bile and the pancreatic fluid, is carried from the intestines by numerous minute vessels which unite into one, and go on straight without any circuitous turn, pouring its contents into a vein that runs under the shoulder-blade, to be forwarded to the heart.

1. THE VEINS AND ARTERIES.—The veins are blood-vessels, of various sizes, which run from all parts of the body towards the heart; but never go from the heart to any part of the body. This may easily be proved by pressing the finger on any of the veins which may be seen swollen with blood on the back of the hand, when the blood will instantly be observed to fill the part farthest from the heart; whilst between the heart and point of pressure the vessel will appear empty of blood. How then, it may be asked, is the blood, which is thus poured by the veins into the heart, returned to the body? This is accomplished, not by veins, but by means of an-

other set of blood-vessels, called arteries, which constantly carry out from the heart the blood that the veins as constantly return to it.

2. THE HEART.—The heart is a strong muscular vessel, formed not unlike a sugar-loaf, placed in the chest towards the front of the lungs, the point of which rests on the midriff or partition-muscle of the chest. It is lodged, in all cases, in a membranous bag, whose interior is moistened with a watery fluid. In the heart are four chambers, which have communicating valves or doors that open and shut, by the nicest mechanism, according as they are wanted.

3. THE COURSE OF THE BLOOD.—We are now prepared to trace the circulating current of the blood in its wonderful course, as discovered by Harvey, about two hundred years ago. The vein in which the prepared aliment becomes mixed with the blood, in passing to the heart, is joined by all the veins from the upper part of the body; the whole forming one large vein, which, as it approaches the heart, is defended by a valve, and unites with another large vein that brings all the returned blood from the lower part of the body.

These two veins, from the two extremities of the body, empty their blood into the first chamber or reservoir of the heart, situated in front, and in some animals on its left side; and when this is full, it bursts open the doors or valves of the second chamber, empties itself into it, and the doors immediately shut behind it, and prevent its return. This second chamber, whose interior is in form of a pyramid, and has fleshy columns or

pillars stretching across it, being now full, its sides contract, and throw the blood with a forcible jet upwards into a large canal—not a vein, but an artery. The outlet here is also guarded with valves, which, when the jet of blood has passed, become shut to prevent its return ; and it is then carried forward to the lungs, to be distributed through their minute cells, and exposed to the air, for the purpose of changing its color from dark to bright red.

As soon as the blood has undergone this change in the lungs, it is passed back again to the heart by a number of minute veins, which unite into four large ones, and these empty their contents into the third chamber of the heart, which has fleshy pillars crossing it similar to those in the second chamber. From this third chamber the blood is carried forward to the fourth chamber which, when it is full, strongly contracts its sides, and throws its blood with a jet into the large artery that branches out to all parts of the body ; the branches becoming more numerous and more minute as they proceed, till at length they become so small as to elude our sight. They refuse, when so very small, to admit the red part of the blood—at least we cannot discover it ; and here we are compelled to confess our limited powers of investigation ; thus far can we go, and no farther.

We have said that the veins return the blood to the heart, and they begin hair-like and minute, in the same way as the arteries terminate ; but we cannot, in any instance, trace the red blood going from the ends of the arteries into the ends of the veins ; for the terminations of the arteries do not contain red blood, but a pale roseate fluid ; and it is only after they increase in size, that

this red blood is discovered in the veins. How then does the red blood pass from one canal into another? How does it pass from the arteries to the veins? We cannot tell; we must acknowledge our ignorance. One thing we know—that the blood supplies nourishment to the body, which would otherwise be daily wasted.

4. SOURCE OF ANIMAL HEAT.—When the dark blood of the veins is changed, by the fresh air taken into the lungs by breathing, into the bright scarlet blood of the arteries, the latent or insensible heat of the air is forced out, and part goes off with the moisture of the returning breath, while part is communicated to the scarlet blood to be distributed throughout the body, previously in part robbed of its heat by the dark blood of the veins, which is always colder than the scarlet blood. This explains the coldness and chills produced when the blood does not circulate freely, and the hot feelings produced by its too rapid circulation.

II.—DISORDERS OF THE BLOOD AND THE CIRCULATION.

Having thus described the changes undergone by the blood, and its circulation through the body, from the heart to the minute hair-like vessels where it escapes our minutest search, we shall now go on to consider the disorders to which it may be liable, beginning with fever and inflammation.

1. FEVER. — *Earlier Symptoms and Treatment.* — Whenever cold shiverings are experienced, there will be the greatest reason to suspect that it is the first

symptom of some disease of a dangerous kind. If heat succeeds, lose no time, but immediately go to bed, and employ means to promote a free perspiration, and support this for at least twenty-four hours. Should perspiration not be produced by these means, it will then be right to take about twenty drops of antimonial wine, every hour, until the effect wished for is produced. Should the shivering return, on the second, third, or fourth day, and be succeeded by heat and then by perspiration, an ague or intermittent fever has taken place, requiring at least three-quarters of an ounce of bark to be taken before the period of time in which it made its second appearance has again elapsed.

If the means recommended have been employed unsuccessfully, the cold shiverings being followed by considerable heat, and pain in the head, loins, and limbs, be assured that a fever is establishing itself. If an acute pain of any part succeeds, with or without the other symptoms just enumerated, there will be great reason to suspect that inflammation is forming; and if these pains do not subside, as the sweat continues, life may be at a risk, and may only be saved by timely bleeding and the adoption of vigorous measures. The degree of danger, in these cases, must of course depend on the violence of the attack and the nature of the affected part. In general this may be judged by the degree of pain, and by the magnitude of the other symptoms.

2. AGUE AND INTERMITTENT FEVER.—*Causes.*—The immediate cause of ague and remitting fever is supposed to be something in the air, termed *miasma*, or *effluvium*, but nobody ever proved this by analysing the air. Such fevers, however, prevail in low marshy countries, abounding with wood and stagnating water; but they prove most fatal in places where great heat and moisture are combined. No age, sex, nor constitution, is exempt from the attack of this fever; but it chiefly seizes persons of a relaxed habit, who live in low dirty habitations, breathe an impure stagnating air, take little exercise, and use unwholesome diet.

Symptoms.—The first symptoms are generally yawning, stretching, pain and giddiness in the head, with alternate fits of heat and cold. There is a pain about the region of the stomach, the tongue is white, the eyes and skin frequently appear yellow, and there are often bilious symptoms. But all the symptoms of this disease vary according to the situation, the season of the year, and the constitution of the patient. They may likewise be greatly changed by the method of treatment.

Treatment.—The first thing to be done is to take an emetic. Take twenty grains of ipecacuanha, and three grains of tartar emetic. Mix it well in half a tumbler of warm water, and take a tablespoonful every minute until vomiting takes place. One hour after, take ten grains of calomel, ten grains of rhubarb, ten grains of jalap. Mix them together, and take it. After the bowels have been purged, then commence with the pills below. I have known several cups of very strong coffee to cure the ague, after other remedies had failed. If everything here recommended fails, take *Fowler's Solution*, commencing with two drops three times a day, and gradually increase the dose to five drops, for a grown person; for children, it must be given in much smaller doses. Profuse sweats must not be promoted, except with great caution, as by this means the patient may be so much weakened as to render the disease dangerous, and the cure difficult.

Pills.—Take fifteen grains of disulphate of quinine, the same quantity of extract of camomile flowers, beat into a mass with syrup, and make into six pills; one every three hours for at least two days, or two every six hours for a week or a fortnight; or

Syrup.—Take sixteen grains of disulphate of quinine, half a pint of syrup; mix, and take three large spoonful every five hours. Six spoonful of this have been known to stop the progress of agues and intermittents.

3. TYPHUS FEVER.—This fever is variously termed, putrid, malignant, pestilential, goal, camp, epidemic, and (when the skin has purplish specks) spotted fever.

Causes.—This disease arises from unwholesome, pu-

trid, or stagnating air. It does not appear to be infectious; but it is sometimes epidemic, from some atmospheric or terrestrial cause. The character of the disease arises from the constitution of the patient, and is not the effect of any specific poison; hence, what will produce inflammatory fever in one constitution, will produce typhus in another. Fear has a prodigious effect in spreading this fever.

Symptoms.—The first thing observed is generally a remarkable loss of strength without any apparent cause; the mind is greatly dejected, and full of apprehensions. There is nausea, and sometimes vomiting of bile; a violent pain in the head, about the region of the stomach, and in the back and loins; the tongue is at first white, but afterwards it appears black and chapped, and the teeth are covered with a black crust. The duration of typhus fever is extremely uncertain; sometimes it terminates between the seventh and fourteenth days, and at other times it is prolonged for five or six weeks. The most favorable symptoms are, a gentle looseness after the fourth or fifth day, with a warm mild sweat. These, when continued for a considerable time, often carry off the fever, and should never be imprudently stopped. The unfavorable symptoms are, an excessive looseness, with a hard swelled belly, large black or livid blotches breaking out upon the skin, thrush in the mouth, cold clammy sweats, change of voice, a wild staring of the eyes, and a constant inclination to uncover the breast: involuntary stools, attended with coldness of the extremities, are generally the forerunners of death.

Treatment.—The first thing to be done is to give an emetic, which, by evacuating the stomach and bowels, produces an equal distribution of blood over the body, promotes the different secretions, and generally succeeds in abating the symptoms; a table-spoonful of yeast should be given twice a day, which affords more relief than any other medicine, by cooling the body, abating the thirst, and diminishing irritability. The sick-room should be well ventilated, and often fumigated. Washing the body with cold vinegar when the

skin is hot and dry, and the application of it to the scalp and forehead, by means of folds of linen, have proved very beneficial. The food should be principally weak veal broth, thickened with a little arrow-root or oat-meal; and the drink, mint-tea or barley-water, with lemon-juice. If, on the fifth or sixth day of the disease, the patient be evidently in a sinking state, a more nutritious diet may be allowed, and the strength of the patient supported. Broiled beef-steaks, with biseuit, and good porter for drink, will be important in all stages of the disorder, particularly in the stage of recovery, provided the stomach will bear this.

4. SCARLET FEVER.—*Causes and Symptoms.*—This appears to be infectious, similar to typhus, though we are ignorant of the nature, and cannot even prove the existence of what is learnedly termed *miasmata*, said to produce it. It begins with chilliness and shiverings, and the whole skin becomes covered with partial inflammations, *more numerous, larger, and redder*, than those of the measles. In two or three days they disappear, succeeded by scalings of the scarf skin, like bran dispersed over the body, which fall off and appear again two or three times successively.

Treatment.—In mild cases, nothing more is required than to observe a low diet, and to avoid a cold air and cold drink. Barley-water, acidulated with tamarinds or lemon-juice, may be drank. The best medicine is the following

Mixture.—Dissolve two drachms of carbonate of ammonia in five ounces of water; two tea-spoonfuls every two, three, or four hours, with cold water to drink at pleasure; or the following

Draught.—Take four grains of camphor, dissolved in half a drachm of rectified spirit of wine; six drachms of pure water, and as much cinnamon water; fifteen grains of carbonate of ammonia, one drachm of syrup of lemon-peel; mix for a draught, to be taken every fourth hour.

Belladonna, in small doses, has been used with great

success in scarlet fever. Many Homoeopathic physicians have employed this drug with good results, in aggravated cases.

5. PUTRID SORE THROAT, OR MALIGNANT QUINSEY.—*Causes and Symptoms.*—The causes of this dangerous and fatal disease are probably the same or similar to those of scarlet fever. The earlier symptoms are also the same; but the alternate chills and heats, pain and heaviness, the expression of anxiety in the countenance, are soon succeeded by slight swelling of the throat, which rapidly spreads over the inside of the throat, has a high florid, or bright crimson appearance, somewhat shining or glossy, and soon attended with whitish spots, which terminate in ulcers; the tongue becomes foul, the breath exceedingly offensive, with general irritation or delirium. There is a partial or general crimson color of the skin, or an eruption of small pustules, the early appearance of which is a favorable omen.

Treatment.—The early application of a blister to the throat, and the use of an acid gargle, will tend greatly to abate the inflammation, and the consequent ulceration. When the diseased parts begin to suppurate, the patient should be supported with strong beef-tea and arrow-root jelly. The spirits should be exhilarated by inspiring a confidence of recovery, and by keeping from him everything that is likely to depress them. Cold water applied to the head, and even to the surface of the body, *if the skin be dry*, is a very important remedy, and should be frequently employed. The same prescriptions already mentioned for scarlet fever, with burnt Port wine and other cordials, should be given.

4. MEASLES.—*Causes and Symptoms.*—Measles arise from the same or similar causes as scarlet fever. The disease commences with the running of water from the eyes and nostrils, sneezing cough, and swelling of the eyes and face, with occasional shivering, cold in the back, and drowsiness; an eruption first appears behind the ears on the third or fourth day, spreading down-

wards to the neck and forwards to the chin, mouth, and forehead, but seldom shows itself on the body till a day or two after. The eruption speckles the skin somewhat like the bites of fleas, and is of a crimson color, and not scarlet, as in scarlet fever. The crimson specks of measles arrange themselves in groups of irregular circles, or crescents, and leave the skin between them of its natural color, which never occurs in scarlet fever. The great danger in measles does not arise from the abundance of the eruption, the severity of the fever, and oppressed breathing, nor the violence of the cough; but almost wholly from the secondary inflammation that comes on, or rather is aggravated, after the fever and the eruption have gone off, which usually happens in nine or ten days. Weakly children, of course, cannot bear to lose enough of blood to subdue this, and die. Many children, also, have this secondary inflammation produced, or increased, by cramming them with too strong food when they are beginning to recover, with the false notion of strengthening them. It is no less absurd to dose the little patients, after measles, with purgatives, provided that their bowels are in proper order. The same medicines as those recommended for scarlet fever will be useful; and, if the cough be troublesome, recourse may be had to the means recommended under "Cough."

7. INFLUENZA.—*Causes and Symptoms.*—This is caused, like measles, either by some peculiar state of the air, or by infection. The symptoms are much the same as in measles, except the eruption of the skin. It generally begins with a sense of stoppage in the nose, a dull pain, and a sense of weight in the forehead, and a stiffness in the motion of the eyes; and, soon after, a discharge of a thin fluid from the nose, and often from the eyes, with frequent sneezing. There is also some hoarseness, and a sense of roughness in the throat, with difficulty of breathing; a feeling of straitness in the chest, and cough. The principal difference observed

between a common cold and influenza is the debility and prostration of strength in the latter.

Treatment.—Similar treatment to that recommended for measles will be advisable; and if the throat and chest are much affected, leeches or cupping may relieve, particularly if followed by a blister.

8. ROSE, ERYSIPELAS, OR ST. ANTHONY'S FIRE.—*Symptoms.*—This is sometimes epidemic, particularly in goals and hospitals. It begins with cold shiverings, succeeded by drowsiness, confusion, and often delirium. After the first, second, or third day of the fever, redness of the skin appears, sometimes on the legs, but generally on the face, gradually spreading over the neck and scalp of the head, which becomes turgid, and the eyelids often so swelled as to close the eyes entirely: blisters of larger or smaller sizes commonly appear, containing a clear watery fluid.

Treatment.—When the head is much disordered, the feet should be put into warm water for ten or fifteen minutes, and a blister applied to the nape of the neck. If these fail to afford relief, the head should be shaved, and a large blister applied to the scalp, and mustard poultices to the feet. The same medicine is to be given as for scarlet fever.

9. SMALL-POX.—*Causes and Symptoms.*—This dreadful disorder is caused by the communication of infectious matter. Children seem listless and drowsy for a few days before the small-pox appears. About the third or fourth day from the time of sickening the small-pox begins to appear like flea bites, and are soonest discovered on the face, arms, and breast. The most favorable symptoms are a slow eruption, and an abatement of the fever as soon as the pustules appear. Pustules which are distinct with a florid red basis, and which fill with thick purulent matter, first of a whitish, and afterwards of a yellowish color, are the best.

A livid brown color of the pustules is an unfavorable symptom; as also when they are small and flat,

with black specks in the middle. It is likewise a very bad sign when they run into one another.

Treatment.—In the early stage of small-pox, when the symptoms run high, we may, in addition to exposing the patient freely to cool air, recommend washing the body partially, or generally, with cold water; for the cold bath seems not only to moderate the febrile symptoms, but likewise to diminish the number of the pustules, and greatly lessens the danger of the disease. The temperature of the patient's chamber should always be such that he may experience no disagreeable degree of heat, but rather a sensation of cold, and except he complains of being chilly, we need not be afraid of carrying the cooling regimen too far. He should lie on a mattress, covered only with a few bed-clothes; a feather-bed being apt to occasion too great an accumulation of heat. If convenient, he should have an apartment to himself, as the heat of a crowded room is sure to prove injurious; and his body linen, as well as that of the bed, should be shifted frequently. One in every ten or twenty has been found to die of the small-pox coming spontaneously, or in the natural way; and about one in two hundred of those who receive it by inoculation. The number and the malignity of pustules will often depend on the treatment at first adopted. If the room be considerably heated, the patient kept in bed under a load of bed-clothes, and plied with heating drinks, such as white-wine whey, the crop of pustules may be expected to be so great, that the powers of the patient will be exhausted before they are ripened and cleared off. Care should be taken not to break the pustules, which causes deeper scars. If the itching is great, a liniment of cream, mixed with magnesia, will allay it. The medical treatment ought to be similar to that of typhus fever, taking care not to give violent purgatives.

Vaccination is now commonly resorted to, as a means of inducing, by proxy as it were, a mild form of disease.

Of its efficacy, there are too many *million* proofs to permit us to doubt.

Of its efficacy, there are too many *million* proofs to permit us to doubt.

The vaccine matter taken from a vaccine pustule nine days after its appearance, and which ought then to be perfectly transparent, on being inserted under the skin, will produce on the third day afterwards a small red spot; on the fifth day the other arm, from the one first vaccinated, ought also to be vaccinated; and, if the first has been perfect, both pustules will ripen precisely at the same time; if this does not take place, the constitution has not been properly affected, and it must be repeated: a simple and easy test which ought never to be neglected. On the sixth day the pustule becomes discolored in the centre. On the tenth day both the pustules will be perfect, and should have a dimple in the centre, and not be raised like a common pimple. A complete test of perfection is, that when pricked with a needle, the contents are not all let out, as in a common pimple; and for this good reason, that the vaccine pustule is composed of many bags, or cells, that do not communicate with one another, while the common pimple has but one bag, or cell. This allows, also, matter to be taken without destroying the vaccine pustule. Another mark of the genuine vaccine pustule is, that its shape is circular or oval, and the margin never irregular and jagged; while the outer margin is deeper red than the space within it, and between it and the centre. It should disappear about the thirteenth day, and the scab fall off in a fortnight. If the pustules want these characters on the ninth or tenth day, and look like a common pimple or an inflamed sore, it will afford no protection from small-pox, however severely it may affect the patient with fever.

The scar (*cicatrix*) left by the vaccine pustule, if genuine, must be distinct, circular, and full of little pits or dimples, spreading in rays, or lines, from the centre to the circumference, and so small that it can be covered with a pea. On the contrary when the scar is large, irregular, and without the little radiated pits or dimples, secondary small-pox, if it do occur, has a chance to be severe. The idea is gaining ground that the protecting influence of vaccination wears out in ten or in fifteen

years ; but, if it does, (and this is far from proved, and very doubtful,) repeating the vaccination, and renewing the insurance, is easy.

10. CHICKEN-POX, SWINE-POX, OR NIRLES.—*Symptoms.*

The eruption termed chicken-pox may be easily distinguished from small-pox by there being little fever, by the pustules appearing first on the back, by the appearance on the second day of a small watery bladder on the top of each, and by its ending in three or four days. It requires no peculiar treatment, but a little confinement, with a cooling diet.

11. ITCH.—*Causes and Symptoms.*—The itch is caused by infection, communicated by contact, not by insects, as usually said, and generally appears first between the fingers, or about the larger joints, in the form of small watery pimples, accompanied by intolerable itching. When these are broken, sores and scabs succeed, and spread to all parts of the body.

Treatment.—Sulphur is a specific in this disorder ; and the cure should begin by the patient taking every night and morning as much of the flour of brimstone and cream of tartar, in a little treacle or new milk, as will keep the belly gently open. He should beware of catching cold, should wear more clothes than usual, and take every thing warm. The parts most affected may be rubbed with the following

Ointment.—Take of the flour of sulphur two ounces ; crude sal-ammoniac, finely powdered, two drachms ; hog's-lard or butter, four ounces ; and a scruple or half a drachm of the essence of lemon, in order to take away the disagreeable smell. About the bulk of a nutmeg of this may be rubbed upon the extremities at bed-time, twice or thrice a week. It is seldom necessary to rub the whole body ; but, when it is, it ought not to be done all at once, but by turns, as it is dangerous to stop too many pores at the same time.

12. TETTER AND RINGWORM OF THE FACE.—*Causes and Symptoms.*—This does not appear, like ringworm

of the head, to be contagious, but to arise in young people from colds, and slight derangements of the stomach. Tetter is generally preceded by headach, pains in the limbs, slight shivering, alternating with flushes, and other feverish symptoms. A sort of stiffness and tingling pain, with slight itching, soon begins to be felt where the tetter, or ringworm, is about to appear, and the part soon becomes red and inflamed. Little blisters, or vesicles, then appear in clusters upon the inflamed part, which is very often upon the edge of the upper and under lip, and at the angle of the mouth. It is also very common on the tip or sides of the nose, and sometimes on the chin. At first the little blisters, or vesicles, contain a transparent fluid; but in the course of twenty-four hours, it becomes muddy, turbid, and yellowish white; and, at last, is changed into thick brownish yellow matter, and forms thick dark crusts. If these are picked off, a kind of viscid, gummy, transparent matter succeeds, and encrusts the part anew. If it is let alone, the swelling subsides, and in four or five days the crusts begin to fall off; the whole duration of the eruption being about ten or twelve days.

Treatment.—As the disorder always runs a regular course, it is not only useless, but hurtful, to attempt to stop it after the blisters have appeared; because it is impossible to stop them from forming, and any application intended for the purpose, will only make them longer of healing. When the stiffness of the parts, however, gives warning of the approach of tetter, it may sometimes be prevented by stimulants, such as Eau de Cologne, or the following

Wash.—Put into a phial, containing half a pint of brandy, as many strawberries as it will hold; cover the mouth with a piece of bladder, let it stand for a week in the sun, and then strain it through a linen cloth; put in more strawberries, as at first, and add half an ounce of camphor; apply a pledget of linen, soaked in this, to the parts.

The tingling, smarting, and burning heat, when very troublesome, may be reduced by sugar-of-lead water, or water in which a little nitrate of potass has been dissolv-

ed. If the little vesicles, or blisters, however, are rudely broken, the sore that follows is longer of healing. But if each individual vesicle be carefully picked with a needle, and the fluid evacuated before it becomes milky or colored, the pain will be diminished, and the irritation sooner reduced.

When a similar disorder is found on other parts of the body, it is termed *shingles*, and may be cured by bathing the parts with one drachm of sulphuric acid, in a quart of water; or by boiling an ounce of quicklime, and half an ounce of flowers of sulphur, in six pints of water, and applying cloths dipped in it to the shingles.

13.—RING WORM OF THE HAIR AND SCALD HEAD.—*Causes and Symptoms.*—This appears to be caused by slight scratches neglected, or by infection, and consists of scabby eruptions at the root of the hair. When the scabs are once formed, they confine the acrid matter under them, which frets and irritates the skin, and tends to spread the disease.

Treatment.—The first thing indispensable to the cure, is carefully loosening the dried scabs, and picking them away. Soap and warm water is the best thing for this purpose, and ought to be carefully repeated both morning and evening. A single neglect will lose all the ground previously gained. All the hair which will come away without pain ought, also, to be removed; then try the following

Wash.—Take half an ounce of sulphate of potass, one pint of lime-water, one ounce of soap liniment, mix and make a lotion, to be applied twice or thrice a day. Formerly, a wash of tobacco was held in much esteem; and lately the water obtained at the coal-gas works has been highly spoken of, but all remedies are often found unavailing. Perhaps the most certain method in obstinate cases is touching the parts daily with nitrate of silver or lunar caustic.

14.—COMMON SCURVY AND SCORBUTIC ERUPTIONS.—*Causes and Symptoms.*—Most of the pimply and scurfy

eruptions on the skin are caused by obstructions in its pores or by disordered digestion, and are sometimes very obstinate.

Treatment.—In all such eruptions, abstain from strong liquors and spices, or high seasoned food, while the bowels should be kept gently open by small daily doses of Epsom salts or the compound rhubarb pill. A weak wash of nitrate of silver is the best application. Vapor and sulphureous baths, or steam directed to the parts affected, may do good. All advertised nostrums, such as cold cream, kalydor, and the like, should be avoided.

15. INFLAMMATION.—*Symptoms.*—Very small hair-like vessels have been above described at the farthest traceable point of the veins and arteries, so small that the blood in them is no longer observed to be colored, but clear and limpid like the watery matter which may be seen oozing from a cut after it has ceased to bleed. Now by a blow, a bruise, or some such cause, the circulation of the blood through these small hair-like vessels may be wholly or partially stopped; and, if this obstructed blood is pushed on by the fresh tide of blood from the heart, it will, of course, proportionably bulge out these small vessels. As it is the blood from the heart, which distributes fresh heat through the body, it may be easily inferred, that the heat of an inflamed part will increase with the greater portion of scarlet blood; and that the pushing and bulging will cause considerable pain, along with a hardened feel of the parts. If the inflammation is extensive or violent, it irritates the whole system, makes the heart and the pulse beat quicker, and brings on the state called fever.

Progress and Termination.—The inflammation thus described, either goes on till the circulation in the obstructed hair-like vessels gradually returns to its healthy state; or it produces suppuration in the parts in the form, first of an abscess, and secondly of an ulcer; or it destroys the parts altogether, called gangrene and mortification; or it continues in a slow, languid sort of state, called chronic inflammation.

Treatment.—All inflammatory disorders must be treat

ed so as to draw off the tide of blood from the heart pressing towards the affected parts, and by restoring to such parts their natural color and their natural heat. Hence taking away blood by leeches, and using only such diet and drink as are light, cooling, and not liable to increase the action of the HEART, will be advisable.

We shall now briefly notice inflammations of the several organs.

16.—INFLAMMATION OF THE THROAT IN A COMMON COLD.—*Symptoms and Treatment.*—In a common cold, the upper part of the throat, the curtain (*velum palati*) between the back-nostrils and the mouth, and the wind-pipe, are all more or less inflamed, and produce a sort of tickling, which occasions a frequent troublesome cough. This may, in general, be removed by drinking freely of treacle posset, vinegar or orange whey, barley water or gruel, but without having recourse to any considerable increase of bed-clothes, or of the temperature of the room. Bleeding, in general, is not necessary; but should tightness of the chest, pain in the side or in any part of the breast, or should shortness of breathing come on, the attempt to treat this disease without regular advice, may sometimes occasion its termination in consumption. When cough continues, and does not yield in a moderate time to sipping barley water, made thick and sweetened by the addition of figs and raisins; or by occasionally taking some softening mixture, such as a mixture of equal parts of honey and oil, with a little lemon juice, it may be suspected to depend on some serious diseased state of the lungs.

17.—SORE THROAT AND QUINSY.—*Symptoms.*—This disorder begins with tightness of the throat and pain on swallowing. As the swelling and inflammation increase, the breathing and swallowing become more difficult, the pain affects the ears, the eyes generally appear red, and the face swells. The patient is often obliged to keep himself in an erect posture, being in danger of suffocation: there is a constant nausea, or inclination to

vomit. Though the pain in swallowing be very great, yet, while the patient breathes easily, there is not so much danger. An external swelling is no unfavorable symptom; but if it suddenly falls, and the disease affects the breast, the danger is very great. A frothing at the mouth, with a swelled tongue, a pale and ghastly countenance, and coldness of the extremities, are fatal symptoms.

Treatment.—The throat ought to be rubbed twice or thrice a day or oftener, with a little of the volatile liniment composed of equal parts of olive oil and hartshorn. This seldom fails to produce some good effects. At the same time, the neck ought to be carefully covered with wool or flannel. Blistering upon the neck or behind the ears is very beneficial; after the plasters are taken off, the parts ought to be kept running by the application of Savine ointment, till the inflammation is gone; otherwise, upon their drying up, the patient will be in danger of a relapse. When the patient has been thus treated, suppuration seldom happens.

Gargles for the throat are likewise very beneficial. They may be made by adding to half a pint of barley-water two or three spoonfuls of honey, and the same quantity of currant jelly. The gargle may be made more cleansing, by adding to it a tea-spoonful of the spirit of sal-ammoniac. There is no disease wherein the benefit of bathing the feet and legs in warm water is more apparent.

18.—INFLAMMATION OF THE LUNGS AND PLEURISY.—*Symptoms and Treatment.*—Inflammation of the lungs is known by shortness of breathing, tightness and slight pain across the chest, with fever. In children this disease may always be dreaded, when their breathing is quicker than natural; especially if accompanied with wheezing, and with increased heat of the skin. Whether in children or in others, the disease never happens without danger; if neglected, its termination will most probably be in consumption. Obtain, therefore, the best advice directly; but if prevented in this, lose not too much time

In waiting, but apply one, two, or more leeches to the chest of the child, according to its age. Produce sweating as soon as possible, by giving four grains of Dover's powders, followed by warm tea; cover the child with blankets, and give a weak solution of tartar emetic, so as to produce nausea. To a grown person, apply a blister over the seat of pain, and bleed freely from the arm. open the bowels, give the solution above, produce sweating, and dress the blister after it has been on eight hours with savin ointment. When the pain is acute, and it is difficult to take a long breath, it is pleurisy, or inflammation of the membrane lining the chest.

19. INFLAMMATION OF THE STOMACH.—*Symptoms and Treatment.*—This disease is pointed out by an acute pain rather towards the pit of the stomach, or just beneath the ribs on the left side, accompanied by the vomiting of every substance immediately on being swallowed. But as the stomach is so irritable and tender, there must be particular care that only the most mild liquors, and those in very small quantities, be taken. It must in every other respect be treated as inflammation of the lungs.

20. INFLAMMATION OF THE LIVER.—*Symptoms.*—This disease usually commences with depression of mind, disturbed sleep, frightful dreams, and irritation of temper, succeeded by cold shiverings, dull, wearied pain in the small of the back, and frequently headache, giddiness, and stiffness of the eyes. These cold shiverings are succeeded by disagreeably hot flushings, the tongue dry, white, and furred, and the mouth clammy, attended with great thirst and dry skin. The breathing and the pulse are quickened and irregular, and there is general weakness, loss of strength, and uneasiness all over the body. Under the margin of the ribs, on the right side, where the liver lies, there is tension and a sharp pain, usually increased on pressure; but never going off like the pain from flatulence or wind in the bowels, and often shooting backwards to the spine, and upwards to the shoulder.

blade and collar-bone, and rendering it uneasy or painful for the patient to lie on the left side. After an attack of acute inflammation has subsided, there may still remain a few embers of it to keep the liver too hot for a state of health, and this state of things may continue and increase for years without proving fatal, or even confining the patient to his room. It is a much more common case, however, that the disorder steals insidiously on the patient, putting on the mask of almost every other disease.

Treatment.—Take twelve ounces of blood from the arm, and apply a blister over the liver. Give small doses of *aconite*, or a solution of tartar emetic, to keep up a nausea, and open the bowels with the draught below. Should the disease become *chronic*, the skin and the white of the eyes become yellow; take one blue pill night and morning, (with warm baths,) until the gums become a little sore.

Draught.—Take ten drachms of infusion of senna, three drachms of Epsom salts, one drachm of tincture of senna, same quantity of syrup of mulberries, mix for a purgative draught; to be repeated every four hours till it operates.

21. INFLAMMATION OF THE BOWELS.—*Symptoms and Treatment.*—If sharp pain be felt lower than the stomach, attended with almost constant sickness and obstinate costiveness, inflammation of the bowels is to be apprehended, which, unless powerfully opposed, must terminate fatally in two or three days. The best advice must therefore be obtained as soon as possible; bleeding and the warm bath being employed in the meantime. Be careful, whenever symptoms arise like these, that no heating cordials, spices, or spirits be taken, under the expectation of lessening the pain; since just the contrary effect must be produced by them.

22. INFLAMMATION OF THE URINARY ORGANS.—*Symptoms and Treatment.*—If the pain be felt in the loins, or in a directions from the loins towards the lower part of the belly, with frequent vomitings, inflammation of the kidneys, the organs by which the urine is separated from the blood, or inflammation of the ureters, the vessels which carry the urine to the bladder, has most likely taken place. If the pain is seated at the bottom of the belly, with great tenderness on pressure, and difficulty in voiding the urine, it may be concluded that inflammation of the urinary bladder has come on. Bleeding and the warm bath may be had recourse to; and these two most powerful remedies must be aided by abstaining from food, and by emptying the bowels by some cooling physic.

23. RHEUMATISM OR INFLAMMATION OF THE JOINTS.—*Symptoms.*—The first hints of an attack of rheumatism are weariness, languor, a cold feeling about the small of the back, succeeded by at first shifting pains in the limbs and joints, which afterwards fix in the knee, the ankle, the shoulder, or any of the larger joints, and rarely in the toes or fingers, as gout does, by which it is for the most part easy to distinguish the two disorders. The joint attacked becomes distressingly painful, swollen and red, and the warmer it is kept it grows the worse, the heat of the bed usually increasing the pain. From this fact the absurdity is obvious of wrapping up the parts with flannel on all occasions, as is usually done. The feverishness and thirst seldom continue violent above two or three weeks, and often not so long.

Treatment.—The first object then must be to open the pores of the skin, and for this purpose nothing is superior to the warm bath, or the vapor bath, followed up by ten grains of Dover's powder. After a copious sweating dry the body and put on flannel, and take hydriodate of potass twenty grains, four ounces of water, and four ounces of the tincture of colchicum, mix them together,

and take a tablespoonful three times a day, directly after eating, and avoid while taking it all acids.

The wet sheet will often cure. If the case is obstinate, try it. Wrap the naked body in a sheet wet with cold water, then wrap over this many blankets, and in a short time it will produce copious sweating, and great relief. For external applications, nothing is better than opodel-doe or soap liniment; these articles, well rubbed in with a piece of flannel once or twice a day, will be of great service. The body must always be well clothed in flannel, and the feet kept perfectly dry.

P. S.—Frequent bathing with cold water is a good preventive against rheumatism.

24. SLIGHT INFLAMMATION OF THE JOINTS, POPULARLY TERMED NERVOUS RHEUMATISM AND FIDGETS.—*Causes and Symptoms.*—Several writers have erroneously concluded that this disorder arises from an overflow of nervous power in the parts affected, which gnaws at the limbs to put them in motion, in order that it may be properly used; but whoever takes exercise, in hopes of removing the fidgets, will find that it infallibly increases the complaint; while rest, and firmly resisting any propensity to change the position of the limbs, will cure it for the time. The cause then is clear, that the fidgets arise from the fatigue and an accompanying inflammation, and not from the rest of the muscles and nerves affected.

If a delicate lady sit all day at her work-table, or spend eight or ten hours in practising on the harp or piano-forte, she has every chance of having a severe fit of fidgets, both in the arms and legs, during the evening; and a literary man who studies long hours will be similarly affected: because, though the muscles and nerves have not been in very active motion, they have been more fatigued than if they had been kept on the stretch. That this keeping on the stretch is more painful than violent exercise, can be proved instantly by holding the arm stretched from the body for about ten or fifteen minutes,

when will intallibly produce a fit of the fidgets even in the most robust, and this disproves irrevocably and irresistibly the erroneous explanation of the doctors, who say fidgets are caused by rest.

Treatment.—To cure the immediate fit which is often very distressing, rest is decidedly the most powerful means. Lying on the back on a sofa, and keeping the limbs immoveable, will often be effectual in about half an hour or less: if a more immediate remedy be wanted we recommend the following

Mixture.---Take half a grain of acetate of morphia, two ounces of clarified syrup, mix and take a tea-spoonful as occasion requires: but not oftener than once every three hours. Twenty drops of laudanum will also do, when the patient is not bilious. These means will cure any single fit of fidgets, but when the fits are frequent and distressing, the cause must be discovered and removed; and as the disease depends much on weakness and relaxation in the tone of the parts, which causes the blood-vessels to become loaded, nourishing diet must be taken, avoiding slops, soups, white meat, and watery vegetables, and persevering in exercise and the use of the flesh-brush.

25. GOUT.—*Causes.*---All the blood in the great toe comes directly from the heart, and as soon as it has done its duty in repairing what has been worn in the skin, the muscles, and the bones, it must return to the heart through the small hair-like vessels into the veins, and if these vessels be obstructed, so as to prevent the return of the blood, and more blood flows to the toe than they can admit, the portion of blood which cannot make its way must be stopped in its course. Now the accumulated blood must swell out the vessels of the toe where it is imprisoned; and hence the whole toe will become swelled and enlarged, while the unusual pressure this causes will stretch the nerves and produce great pain. Gout is brought on by cold and damp in this way. The skin becomes red on applying to it a piece of ice, by producing a contraction in the small vessels, preventing the blood from flowing through them, and of course

causing its accumulation in the larger vessels, where its progress is arrested, for as heat expands bodies, so cold contracts them; but if the contraction caused by cold can be speedily removed, no fit of gout will follow; damp acts precisely like cold. Some patients are almost certain of an attack if they are exposed to the east wind, or foggy weather; if they stand on a damp pavement, or put on damp stockings.

Symptoms.—The attacks sometimes come on suddenly, but are generally preceded by indigestion, flatulence, loss of appetite, cramp in the stomach, and sometimes by headach, stupor, numbness, a sense of pricking in the thighs and legs.

Treatment.—Every patient must be treated, during a fit of the gout, according to his constitution; that is, the young must be reduced by purgatives, local bleeding, and low and cooling diet; while the old or feeble must be supported by a more tonic and generous treatment. In every severe case the following should be tried.

Mixture.—Take one grain of acetate of veratria, one grain of acetate of morphia, six ounces of clarified syrup, mix very carefully, and take a tea-spoonful every hour, or every two hours, till the pain abate, which it will usually do in the course of the night: and the fit will be completely removed without the least danger. This medicine must be followed by a dose of Epsom salts and senna in the morning, and in the old or feeble, with a few doses of disulphate of quinine, in the young and robust, with extensive leeching to the part affected. The only bad effects from gout medicines arise from trusting too much to them, and indulging in strong drink and rich dishes, instead of abstaining. A fit of gout, it is said, will be quickly removed by what is called moxa, namely a pencil of flax, cotton, or other combustible set on fire, and put upon the part in pain till it burns into a sore.

26. SCROFULA OR KING'S EVIL.—*Causes and Symptoms.*—The usual cause is hereditary taint or whatever may reduce or impair the health. But in all its forms

of swelled glands in the neck, bad ulcers and sores, and white swellings of the joints, it is mainly produced by a disordered state of general health, and particularly of the stomach.

Treatment.—In this serious disorder the diet should be generous, the open air, clear, dry, and bracing. Strong purgatives are to be avoided: if the body be regularly open it is sufficient. Salt water bathing is very efficacious, so is salt water taken as a purge.

As the superabundance of acid is evidently one of the chief causes of scrofula, chemistry tells us the best remedy will be alkalies to destroy the acid. The following may be tried.

Mixture.—Upon two ounces of fresh quick-lime pour three pints of soft water, cover it up close for about an hour and pour off the water, which is to be strained and kept in a bottle closely stopped. For a child, three table spoonfuls to be taken four times a day, in a cup of dandelion or beef-tea. For an adult, twice or thrice this dose.

27. RICKETS, CURVED SPINE AND DEFORMITIES.—*Causes and Symptoms.*—Improper food and improper confinement produce in the bones a similar disorder to that termed scrofula in the flesh. Prior to any twist of the spine, there is a feeling of general weariness and fatigue from the slightest exertion, with listless inactivity, and a disposition to stoop, while the manners become careless, ungraceful, and spiritless.

Treatment.—Besides attending to air, exercise, and nourishing diet, it is necessary to attend most carefully to the stomach and bowels, as the prevalence of acidity or costiveness will render all other exertions useless. To prevent costiveness, we should recommend the following

Pills.—Take twenty grains of powder of jalap, ten grains of blue-pill mass; a sufficient quantity of syrup of buckthorn; mix, and divide into six pills, one every second or third night, and a wine-glassful of senna tea on the following morning.

The acidity which gives rise to sour belchings, heart-burn, gripes, disordered bowels, and frequently to unnatural hunger, is to be combated chemically by the following

Powder.—Take from two to three grains of trisnitrate of bismuth, four grains of magnesia, half a grain of ipecacuanha in powder, ten grains of cinnamon in powder; mix, and divide into twelve papers; one to be taken three or four times a day.

28. SEA SCURVY.—*Causes and Symptoms.*—This does not, like the preceding, depend so much on original constitution as on improper diet, particularly a long continued course of salted meat without fresh vegetables, along with despondency, all of which are increased by cold and moisture. In this disease, there are pale and bloated complexion, spongy gums, livid spots on the skin, offensive breath, swelling of the legs, foul ulcers, fetid urine, and extremely offensive stools. In its last stage the joints become stiff, the tendons of the legs rigid, there is bleeding at different parts of the body; at length, violent purging or dysentery comes on, and proves fatal.

Treatment.—The most important agent in the cure is the excitement of hope, and next to that fresh bread or fresh vegetables, or where these cannot be had sweet-wort, lemon-juice, vinegar, pickles, sour-kROUT, and the like.

29. CANCER.—This complaint calls for the immediate intervention of the surgeon. Hemlock is a favorite drug in use; and the knife in proper hands may be applied; but never, unless the prospect of a subsequent healing is manifest.

The patient must refer *wholly* to his surgeon, we repeat.

30. DROPSY.—*Causes and Symptoms.*—This is often brought on by hard drinking and irregular living, it also follows fevers and other severe disorders. It begins with a swelling of the feet and ankles towards night,

and the parts, if pressed with the finger, will pit. The swelling gradually ascends towards the belly, and afterwards the breathing becomes difficult, the urine is in small quantity, and the thirst great. To these succeed torpor, heaviness, a slow wasting fever, and a troublesome cough is generally a fatal symptom.

Treatment.—If the fluid be seated in the cavity of the belly, it should be drawn off by an expert surgeon. Exercise is highly useful. It will be important to keep the bowels regularly open, by gentle doses of rhubarb. Diuretic medicines are very useful, such as the tea made of broom tops, a cupful twice a day; or squills in the form of pill or of oxymel; or nitre, two scruples in twelve ounces of hot water, with syrup of orange peel, a cupful every two or three hours will do good. Fox-glove is one of the most powerful remedies. Cream of tartar in drachm doses every two or three hours, is also excellent.

31.—WATER IN THE CHEST.—*Symptoms.*—This generally comes on in advanced life, with difficulty of breathing, particularly on motion, and when in a horizontal posture; sudden startings from sleep, with anxiety, and palpitations at the heart, irregularity of the pulse, cough, paleness of visage, dropsical swellings of the legs, thirst, and a diminution of urine, which is high-colored, and, on cooling, deposits a pink or red sediment. There is a sensation of water in the chest, on certain motions of the body, as if the heart were moving in a fluid.

Treatment.—This being only a species of dropsy, is treated in the same way. Fox-glove is by far the best medicine, but requires to be taken under skilful advice.

32.—WATER IN THE HEAD.—*Treatment.*—No medicine has hitherto been found sufficient to carry off a dropsy of the brain; those generally used are purges of rhubarb, or jalap, with calomel; and blistering plasters applied to the neck, or back of the head.

D.—DISEASES OF THE NERVES.

IN order to explain the diseases or derangement occurring in the organs of sensation and motion, it will be necessary to give a brief and plain description of these organs.

I.—HEALTHY STATE OF THE BRAIN AND NERVES.

The brain is encased in the strong bones of the skull, and is farther enveloped in strong membranes ; the outer, smooth and without elasticity ; the inner, very soft and delicate. The substance of the brain and spinal chord is, like the blood, composed of minute globules ; and the whole mass of these is composed of two substances : one, grey, which in the brain is situated exterior to the other, which is white ; but in the spinal chord, the white is situated exterior to the grey. The peculiar organs, termed nerves, are white, soft, and threadlike chords, running to all parts of the body, and becoming smaller and more branched, as they are more distant from the brain and spinal chord.

Formerly, all the nerves were supposed to have only the function of sensation ; but Sir Charles Bell has proved, that some only are endowed with this function, while others are appropriated to the production of vol-

untary motion. Besides the nerves connected with the brain and spinal chord, there is a system of numerous and extensive nerves, which are only connected with the other nerves by very small twigs; and the system is therefore considered as being partly independent of the others. This partially independent system of nerves is termed the ganglionic system; and the whole is sometimes also called the great sympathetic nerve, or the intercostal nerve. This last is very important in its connection with the organs of the chest and belly.

II.—DISORDERS OF THE BRAIN AND NERVES.

We shall now proceed to consider the disordered state of the organs just described.

1. INFLAMMATION OF THE BRAIN.—*Symptoms and Treatment.*—If a patient be affected with severe pain in the head, light-headedness, fever, redness of the eyes, and impatience at viewing much light, or hearing loud noises, succeeded by shiverings; inflammation of the brain, or its membranes, may be feared to exist. This must be followed with death in a very few days, if not opposed by the exertions of some skilful person. Bleeding profusely, blisters, the strictest regimen, and proper medicines, must be here employed with that degree of firmness and decision, which cannot be hoped for, but where they are directed by a person of real skill; and where the attendants are impressed with the danger of the smallest deviation from orders.

2. FACE-ACH AND TIC DOLOUREUX.—*Causes and Symptoms.*—This is supposed to be caused by some internal pressure on the nerves of the face, and consists of great pain, often amounting to torture in the cheek, upper lip, tongue, ear, and over the face.

Treatment.—Those who are subject to face-ach, ought to attend to their diet, and keep their bowels regular, and wear at night a woollen nightcap, with flaps over the ears. When the disorder amounts to *tic douloureux*, it will be necessary to burn a small space under the ear of the side affected with nitrate of silver; and to take, twice a day, from a scruple to a drachm of sesquioxide of iron, made into pills, with conserve of orange-peel. And see that there are no decayed or aching teeth. If there are any old roots of teeth, have them taken out.

3. *BILIOUS AND SICK HEAD-ACH.*—*Causes.*—This is a very common and very distressing complaint, which is, however, in general, self-procured, and may readily be prevented by avoiding the causes. You cannot possibly escape a severe attack of bilious head-ach, if you indulge beyond due measure,—mark, we say, *due* measure, in eating; while indulging in drinking, smoking, or other sensual indulgences, has an immediate effect upon the liver, by sending to it a deluge of blood from all parts of the body. Now, the office of the liver being to separate bile from the blood, the instant the deluge of blood is driven to the liver, by the weight of what has been eaten and drunk in the stomach, the liver drains off a gush of bile, which falls into the bowels. Then the nerves which come from the head to the stomach, liver, and bowels, are fretted and irritated by the same load of bile, and send the pain along the twigs of the nerves, which all meet in the central mass of the brain, till the junction of all the little pains forms one very severe pain; and the head-ach is confirmed and intolerable, by its companionship with the liver.

Symptoms.—Bilious headach rarely affects the whole head, but usually a particular part, such as the forehead, extending over one or both eyes, or confined to one side of the head. It goes off sometimes in two or three hours; and sometimes it continues for a day and a night. This differs from the sick head-ach, depending upon the stomach, by being more throbbing and violent; while the sick head-ach is rather attended by a confused and

stupid feeling, and a temporary dimness of sight. The usual bilious symptoms will at once distinguish it.

Treatment.—The first thing to remove the head-ach, is to get rid of the bile, which has caused it by its attacks on the twigs and branches of the nerves, and the companionship of the liver with the head. We should recommend an emetic at night, and the feet bathed in warm water. If the head-ach still continues on the next morning, we should recommend the following

Draught.—Dissolve one ounce of Rochelle salts in a single glassful of senna tea, and add twelve grains of carbonate of potass; mix, and take an hour before breakfast; or, for immediate relief, the following

Draught.—Take twenty to thirty drops of laudanum, a cup of the strongest coffee you can make, a tea spoonful of compound tincture of cardamoms; mix, and take immediately with sugar; the coffee is indispensable. This treatment will usually do for a sudden fit of bilious head-ach; but those subject to the complaint, may try a course of the following

Pills.—Take twenty grains of blue pill, twenty grains of extract of taraxacum, twenty grains of compound aloe-tic pill; make into a mass, and divide into twelve pills. One or two pills every night; and occasionally the draught next morning. Sometimes a few drops of harts-horn will cure a headache like a charm.

4. NERVOUS HEAD-ACH.—Head-ach whether affecting the external or internal part of the head, is almost always owing to the circulation of the blood in the external or internal *carotid* artery. That which occurs from indigestion, or disorder of the stomach and bowels, is usually of the first kind. It often extends itself to the muscles of the neck, and is accompanied with a flushing of the face, and a strong beating of the blood vessels, going to the brain, and their branches, which run to the face and temples. Whatever be the more remote cause, the pain, whether affecting the outer or inner part of the head, is usually accompanied with such a current of blood towards the brain, heat of the head, coldness of the feet, and other circumstances, as indicate

plainly its more immediate cause to be this excessive flow of blood to that part. Thus, it is usually increased by heat, stimulating food and drink, by exercise, and by every other cause, which excites additional force, or quickness in the beating of the heart.

Treatment.—This head-ach is diminished by whatever diminishes the beats of the heart, and changes the current of blood to some other part, or directly diminishes it to the head. Hence it is relieved by cold applied to the head; and when external by a firm bandage round the brow: by rest; by blood-letting, under certain modifications; sometimes by warmth, applied to the feet; and by pressing upon one or both carotids.

5. SWIMMING OF THE HEAD AND GIDDINESS.—*Symptoms.*—There are at least two different species of giddiness, or vertigo. The first is characterised by a feeling of quick rotation in the inside of the head; and it is this which precedes epileptic, paralytic, and apoplectic attacks. In a moment after its commencement the patient is often seized with nausea, and sometimes with vomiting; and at other times, almost immediately falls senseless. Another species is distinguished by a feeling as if objects were becoming dark, when, after stopping, the patient suddenly rises up into the erect posture. It is rarely, if ever, accompanied with sickness, and ought rather to be called swimming than giddiness. In giddiness, there is a greater jet of blood to the brain than is natural; but the sensation in swimming arises from the want of a due current of blood in the brain.

Treatment.—True giddiness may be relieved by blood letting, and pressure upon the blood vessel; while swimming is increased by the compression, and is actually similar to the feeling which precedes fainting from blood-letting.

6. APOPLEXY AND PALSY.—*Causes.*—Apoplexy is caused by the bursting of some blood-vessel of the brain on which the blood is thrown and presses; and may arise from grief, low spirits, over-eating, over-drinking, sud-

den falls, or jars, and the like. Those who are corpulent and short-necked, are most liable, though it is not confined to such.

Symptoms.—There are two sorts of apoplexy. In one of these, a person, apparently in the full glow of health, suddenly drops down, or falls from his chair, and lies as if overcome with a heavy sleep, which is accompanied with snorting, or *stertorous* breathing. The countenance is turgid with blood, and of a reddish purple hue; the eyes are bloodshot, and seem as if starting from their sockets; and their pupils are either greatly dilated, or very much contracted; whilst foam, or frothy saliva, is blown from the mouth with every expiration. In the second form, the attack is preceded by pain in the head, sickness, sometimes arising to vomiting and faintness; and the person falls down, as in a swoon, in which state he dies; or, he recovers his sensibility for a short time, but complains of intense head-ach, and gradually sinks into a state of lethargy, from which he never awakes. In this form, the face is pale and shrunk; and if the individual survive, one side of the body generally becomes paralytic.

Treatment.—In both these forms of apoplexy, the first thing which should be done, is to untie the neckcloth, and to remove every source of pressure from the throat of the sufferer: the next, to carry him into the open air, or a cool spacious room, and to place him in a sitting position, so as to favor the return of the blood from the head; taking care, however, that the head neither falls upon the breast, nor is thrown backwards; either of which positions is apt to place the muscles in such a state as to present an obstacle to the descent of the blood. To divert the blood still more to the lower extremities, and restore its balance over the body, the feet and legs should be placed in very hot water, and rubbed with mustard. If professional assistance cannot be procured, the life of the patient may sometimes be preserved, by making a cut with a sharp penknife, on the temple, immediately before the upper part of the ear, on a line with the outer angle of the ear, down to the bone, so as to divide the temporal artery; and there need be no fear of too great a loss of blood taking place.

7.—EPILEPSY OR FALLING SICKNESS.—*Causes and Symptoms.*—This, like the preceding, is caused by some disordered state of the brain, causing a violent convulsive contraction of the muscles of the extremities, the eyes, the tongue, the lower jaw, and the bladder, attended with foaming at the mouth, and total loss of sensation, and ending in a state of insensibility, and apparent sleep. The fit often attacks suddenly, but for the most part, is preceded by a pain in the head, weariness, and dimness of the eyes.

Treatment.—During the fit, care should be taken that the patient do not injure himself by biting his tongue, and the like, by the violence of his struggles. His clothes should be generally loosened, and his head elevated, with a piece of wood between the teeth. No cup or glass ought to be given him to drink from, till the convulsive delirium has subsided, as he will be apt to bite a piece from such vessels, and injure his mouth. When it has been caused by drinking strong liquors, an emetic will always remove the fit. Bleeding is also, in many cases, of advantage; but this must depend on the circumstances.

8.—FAINTING OR SYNCOPE.—*Causes and Symptoms.*—This originates from an irregular or defective performance of the functions of the brain; the pulse stops, or can scarcely be felt, the action of the heart and lungs is feeble and imperfect, and the utterance is gone. It may arise from exhaustion, such as, after fatigue, long fasting, from acute pain, or from some sudden passion, or by the flatulence attending indigestion. The fit generally ceases after a few minutes, when the person becomes sensible of what is going on around him.

Treatment.—When a person is seized with a fit of this nature, he ought to be conveyed into the free air, and cold water be sprinkled on his face, and poured down his throat. Pungent odours should also be held under his nose, such as aromatic vinegar or hartshorn. He should be laid in a lying position, and the feet and hands rubbed with spirits, or any strong stimulant. As

soon as he can swallow, recovery will be expedited by taking a glass of wine, or spirits and water, or fifteen drops of ether, and the aromatic spirit of hartshorn.

9. CONVULSIVE FITS OF CHILDREN.—*Causes and Symptoms.*—The convulsive fits of children may be induced by a disordered state of the bowels, or by teething: or may make their appearance towards the fatal termination of chin-cough, or water in the head. The convulsive motions are extremely rapid, the hands and legs being agitated in every direction, the body bent back, the features distorted, the eyelids either open, or opening and shutting rapidly, and eyes either fixed or rolling in their sockets. The duration of this fit is from a few minutes to several hours.

Treatment.—Put the child into a warm bath, having in it a handful of ground mustard; rub the child constantly, and give it an injection as soon as possible, composed of sweet oil, soft soap, molasses and warm water.

10. HYSTERIC FITS.—*Symptoms.*—The hysteric fit seldom comes on without some premonitory signs, such as palpitations, flatulency, sickness, depression of spirits, and the like. A sense of fulness, or pain, is felt in the left side, which gradually mounts up to the throat, occasioning the feeling of a ball being there, threatening suffocation. The patient then falls down, and the convulsive action commences. The body is twisted, the hands are clenched, and beat incessantly against the breast; the person rolls on the ground, and screams and laughs involuntarily. When the fit ceases, the patient continues for some time in a stupid and half-insensible state.

Treatment.—During the fit, cold water, vinegar, or Hungary water, may be sprinkled on the face; pungent applications made to the nostrils, and warm friction applied to the extremities. If the patient can swallow, half a teaspoonful of opium and ether, or a teaspoonful of the aromatic volatile spirit, in any aromatic distilled water, may be administered.

11. NERVOUS COMPLAINTS.—*Symptoms.*—In what are vaguely termed nervous complaints, almost no two individuals have the same feelings; but generally the patient is annoyed with flatulence, fretfulness, and fears of imaginary evil; and uncomfortable heat, attended by flushings of the face. The deceptive colour of the cheek, indeed, is always attended by this most disagreeable feeling of heat even in the coldest weather. Along with such symptoms there will almost uniformly be a chiliness, or coldness of the feet. Sometimes they will be cold and dry, as if exposed to frost; at other times, they will feel as if they were plunged in cold water; and again they will be drenched in cold perspiration. The nerves being feeble, weak, and irritable, are very liable to be affected by slight causes; and from their close connection with the mind, through the brain, are apt to produce low spirits, agitation, irritation and fear; the patient will start violently and be alarmed at the shutting of doors unexpectedly; even the accidental fall of a piece of money, is felt to be disagreeable; he can scarcely eat his dinner in comfort, for the grating sound of carving and removing; the face will flush, the eyes sparkle, and the whole frame will be thrown into agitation, by the jarring of a door-bolt, or the sudden barking of a dog.

There is often a sensation of sinking and faintness, which comes upon the sufferer, particularly when in a crowd, or from the fatigue of standing or walking for a considerable time, without having taken anything into the stomach. The horror of nightmare is precisely to the night, what the feeling of sinking is to the day; but the sensation called nightmare is even more dreadful than the sinking felt when awake.

Treatment.—The nervous are usually advised, in popular medical works, to strengthen themselves by wine, bark, steel, cordials, and, above all, cold bathing; but but these have a great chance, in many cases, of doing more harm than good. But tepid and warm bathing are excellent when not repeated more than once every two days, or about twice or thrice a week. When the

warm bath cannot be conveniently procured, bathing the feet and legs in warm water, every night at bed time, is an excellent substitute. The diet must be light and palatable, and the patient may judge pretty well of his improvement, by his relish for under-done beefsteaks and ale. Flannel we consider very bad when worn next the skin. The irritation, indeed, of flannel thus worn, has often aggravated, if not produced, the very disease it has been put on to prevent or cure; though flannel and silk be invaluable, when worn over the linen.

It is absolutely necessary to keep the bowels regularly open, and to destroy acid and flatulence; for which purpose try the following—

Pills.—Take twelve grains of chloride of mercury, forty-eight grains of compound extract of colocynth; make into a dozen pills; one pill for a dose at bed-time; and, if not effectual, another on the following morning. For destroying the acid, the following are good.

Lozenges.—Take four ounces of prepared carbonate of lime, one drachm of nutmeg in powder, one ounce of gum arabic, four ounces of lump sugar; rub them together in a mortar, and form a paste with water; roll it out into proper thickness, and divide into lozenges with a silver thimble, or the like; or the effects of the following may be tried.

Pills.—Take twelve grains of disulphate of quinine, twenty-four grains of ammonia-chloride of iron, twenty-four grains of extract of gentian; make into twelve pills; one or two for a dose, twice or thrice a day.

12.—LOCKED JAW.—*Causes and Symptoms.*—This is one of the most dreadful of nervous disorders. It rarely occurs, except in consequence of severe injuries; such as broken limbs, amputations and the like; and is most prevalent in hot climates.

The disease comes on, though sometimes suddenly, for the most part gradually, with an uneasy stiffness in the back part of the neck, and about the shoulders, together with a difficulty of swallowing, followed by a violent pain about the chest, which strikes through to

the back-bone. The muscles of the under jaw become affected with a spasmodic contraction, and the teeth are so firmly pressed together, that they cannot be opened by any force. As the disease advances, every organ of motion becomes affected; the eyes are stiff and immovable in their sockets. The countenance is hideously distorted and expressive of great distress. The whole body, during the fit, becomes as rigid as a piece of iron.

Treatment.—Every powerful remedy, the hot bath, the shower bath, opium, mercury, tobacco, &c., have been tried in vain.

E.—ACCIDENTS AND THEIR TREATMENT.

ACCIDENTS frequently prove fatal, merely because proper preventive means are not employed. No person, indeed, ought to be looked upon as killed by a fall, a blow, or the like, though apparently deprived of life. In all such cases, the first thing to be done is to ascertain the cause, the nature, and the extent of the evil; particularly whether the important organs of the stomach, the lungs, the brain, the heart, or any large blood-vessel, be fatally injured. The following details will, we hope, be found useful.

I.—APPARENT DEATH

In this case there is, or appears to be, a suspension of all the functions, both of the body and of the mind.

DROWNING.—When a person has remained under water for fifteen, twenty, or more minutes, he is suffocated for want of air, and the face appears swelled, and of a livid purple, from the stoppage of the blood in the veins.

In rare instances, recovery has been effected after longer submersion than twenty minutes. The heat of

the body, and the clearness and motion of the pupils of the eyes, are the chief symptoms of life. As death does not ensue from water rushing into the windpipe and lungs according to vulgar opinion, but from the want of air, it is most absurd to hang up the body by the heels, as is often ignorantly done, to let water run out; for little or no water is swallowed in drowning.

Treatment.—The body must be carefully removed, laid on the right side, on a plank, with the head rather raised, and without jolting, to the nearest house, or to a warm and dry situation. When the weather is warm, have the windows open; when cold have a good fire. If the body is to be carried far, it must be quickly stripped, rubbed dry, and covered with the spare clothes of the bystanders, to prevent evaporation, and the cold which this would occasion. To restore heat, place it between warm blankets, and keep up the temperature, by application of *dry* heat in every possible way. Water extinguishes life as it does fire, by keeping off the air; therefore, restoring air to the lungs by inflation, is the means most to be relied upon, and should be commenced without a moment's delay, and continued, perseveringly, during several hours. This is best accomplished by pressing the tongue of the patient downwards and forwards, and passing a small curved tube into the windpipe, and attaching a pair of bellows to it; or, in the absence of these, an assistant must blow into it, to distend the lungs, which may then be emptied by pressing on the chest or belly; expedients which should be done alternately, so as to imitate natural respiration. If oxygen gas could be used instead of common air, it would be much preferable.

Frictions with warm flannels, ought to be going on the while, and stimulating vapors may be applied to the nose. Warm injections (*enemata*) of salt and mustard, or of brandy and water, may be thrown up into the bowels, and warm spiced wine got into the stomach, by means of a flexible pipe and syringe; but this is not to be attempted without such assistance, till the patient can swallow. Bleeding is a doubtful remedy, but has

been occasionally had recourse to when the countenance was very dark, and the limbs warm and flexible.

Recovery.—The first signs of returning animation are sighing, gasping, convulsive twitching of the limbs, and slight pulsation of the heart. When these symptoms make their appearance, the efforts, instead of being remitted, should be redoubled, for four or five hours, since all danger is not yet passed; many having perished, from neglect, in the after-treatment. These favorable appearances ought, therefore, to be encouraged, by giving, occasionally, as the person will now be capable of swallowing, a spoonful of wine, and a little food of the lightest description. The sufferer should also be placed in a warm bed, and should enjoy the greatest tranquillity.

2. HANGING AND STRANGULATION.—After the rope has been removed, the same means are used as in drowning; only, although rubbing is proper, there is no occasion for heating the body, and bleeding may be more frequently necessary, particularly from the jugular vein.

3. SUFFOCATION OR CHOKING FROM BREATHING CERTAIN GASES.—The sorts of gas which cause suffocation when breathed, are nitrogen or azote, carbonic acid gas, hydrogen gas, and chlorine.

Treatment.—A person in a state of suffocation, from any of these causes, ought to be removed, in the first place, into the open air; and his clothes being taken off, he should be placed on his back with his head somewhat elevated. The coldness of the atmosphere, even in winter, ought to form no obstacle, nothing being more pernicious in such a case than placing the patient on a warm bed in a warm room. If the patient can swallow cold acidulated liquids, such as vinegar and water, or lemonade, they should be plentifully given. The face is to be bathed with vinegar, and the whole body is to be sponged with vinegar and water, and rubbed with clothes dipped in any spirituous liquid. Rubbing with

the flesh-brush may afterwards be employed. Aromatic vinegar, or any strong-smelling stimulant, may be held under the nose. But the most important part of the process is inflation of the lungs. This may be done either with a pair of common bellows, or, what is better, with the double bellows, employing oxygen if it can be had in place of atmospheric air. Bleeding has been recommended when the countenance is livid, the lips swollen, and the eyes protruding; but probably, if performed, no blood will flow.

Recovery.—When symptoms of recovery make their appearance, the person is to be placed in a warm bed, the windows of the room being opened. A spoonful of good wine may be given from time to time.

4. STROKE OF LIGHTNING.—When the body is struck by lightning, death is often, though not always, the consequence. In such cases the skin appears pale, the limbs flexible, the blood uncoagulated, and the system retains its warmth even long after death has taken place.

Treatment.—Stimulants of the most active kind will be found of great service. Electricity promises to be especially useful. But, perhaps, the best remedy is to dash cold water over the whole person of the sufferer, commencing with the head.

5. EXPOSURE TO INTENSE COLD.—Exposure to great degrees of cold brings on an irresistible desire to go to sleep; but as this arises from the incipient freezing of the blood, if it be indulged in, it will most probably end in the sleep of death.

It is best to commence with rubbing the body with ice-water or snow. This may be succeeded by water of the usual temperature, gradually and slowly raising it till it reaches the natural heat of the body. If convenient, immersion in sea-water or salt-water is to be preferred, the same caution being used in raising its temperature. When the breathing is apparently gone, blow into the lungs as in drowning.

After the body has been thus gradually restored to its

natural heat, it is to be conveyed to bed, in a moderately warm room, and to be rubbed either with the flesh-brush, or, what is better, with the warm hand, several being engaged in this operation at the same time.

It is customary among the Canadians, in travelling, when one of their number falls into this condition, to bury him in the snow, which being warmer than the surrounding atmosphere, keeps him in a state of gentle warmth till the following morning, when they return to relieve him.

6. CHOKING FROM ANY SUBSTANCE IN THE GULLET.—If a splinter of bone, a bit of wood, or hard bread-crust, a pin or the like, is accidentally swallowed and sticks in the gullet, it is most readily removed by vomiting, excited by tickling the back part of the throat or fauces; or a large goose or swan quill may be introduced into the throat, and twirled round. By this means the substance will be disengaged and fall down into the stomach; sometimes it may be carried down by a plentiful draught of water. Even after the substance is removed, a roughness remains, which makes the patient think that it is still there.

If the obstructing substance is large, it may not only obstruct the passage, but also, by pressing on the windpipe, produce the most urgent symptoms of suffocation. In such a case, the first endeavor ought to be to attempt to extract the substance by the mouth, if it is within reach; but if not, an instrument termed a *probang*, composed of a piece of whale-bone, so thin as to be pliable and yet to have some firmness, with a bit of sponge attached to the end of it, must be pushed down, over the opening of the windpipe at the back part of the mouth. In some cases it is even necessary to cut down to the gullet, and in that manner extract the substance; and this may be done with very little danger.

7. CHOKING FROM ANY SUBSTANCE IN THE WINDPIPE.—Every morsel that is swallowed slides slowly over the top of the windpipe, but is prevented from getting into

it by a moveable sort of lid which the passing morsel shuts down. The only way in which anything swallowed can get under this lid, is during the lifting of it by incautious breathing while swallowing, an accident very common among children.

Remedies.—The common effort of nature in coughing usually drives out any substance from the windpipe; but if a blade of grass, a fish-bone, a pea, or the like, get into the windpipe, and danger is urgent, the only chance is cutting into the windpipe, which may, with no great hazard, be done with a penknife.

8. DRUNKENNESS.—When a person is intoxicated so far as to have become insensible, he should be placed in a large room, to which the air is freely admitted, and should be allowed to remain in a lying position, with his head to one side, to favor vomiting, which should be excited by tickling the back part of the throat with a feather, or if that fail, by an active emetic. This should be succeeded by an injection of common salt. If the nausea and vomiting continue after the stomach is evacuated, effervescing draughts of soda or seidlitz water should be employed.

II.—POISONING.

As most poisons when taken in any quantity, are either speedily fatal or produce derangements out of the reach of cure, often before medical assistance can be obtained, a few plain directions become consequently very important in a work like the present. The stomach-pump is certainly the most ready and most effectual means of remedy, when it is at hand, though it is not every one that can use it; but when a stomach-pump cannot be procured, recourse may be had to other measures. Nothing can be effectually tried, however, unless the sort of poison which has been taken be first ascertained, and this, unfortunately, cannot always be

done. It will be convenient to arrange poisons according to their effects in producing mortification, in acting through, or in affecting, the brain and nerves.

1. POISONS PRODUCING MORTIFICATION.—Poisons of this class act by destroying the lining membrane of the stomach and bowels, in a similar manner as the skin may be destroyed by caustic or a hot iron; and when the other coat of the stomach has been thus injured, mortification comes on and soon ends in death.

Names of these Poisons.—Oxalic acid, sulphuric acid or oil of vitriol, nitric acid or aquafortis, hydrochloric acid or spirit of salt, ammonia or hartshorn, potass, soda, nitrate of silver or lunar caustic, verdigris, bichloride of mercury or corrosive sublimate, gamboge, (the basis of Morrison's pills), Croton oil, and cantharides.

Symptoms from the four Acids.—Acrid burning taste, acute pain in the throat, stomach, and bowels; frequent vomiting of bloody fluid, which effervesces with chalk, and reddens litmus paper; hiccup; copious stools, more or less bloody; tenderness of the belly; difficult breathing; irregular pulse; excessive thirst, drink increasing the pain, and seldom staying down; frequent but vain efforts to make water; cold sweats, altered countenance, convulsions and death.

Treatment.—Mix an ounce of calcined magnesia with a quart of water, and give a glassful every two minutes. Soap, or chalk and water, may be used till magnesia can be procured. Chalk with water is preferable to magnesia, if oxalic acid has been taken. Vomiting is to be excited by tickling the throat; and gruel or barley-water to be taken after the poison is got rid of: the return to solid food must be very gradual.

If vitriol has been swallowed, neither water alone, nor calcined magnesia with water, should be given; but the common carbonate of magnesia may be given freely when mixed with water. There is too much heat generated in the stomach if the above cautions be not attended to.

Symptoms from the three Alkalies.—The taste acrid, urinous and caustic; great heat in the throat; nausea, and vomiting of bloody matter, which changes syrup of violets to green, and effervesces with the acids if the carbonated form of the alkali has been taken; copious stools, acute pain of the stomach, colic, convulsions, derangement, and death.

Treatment.—Vinegar and other vegetable acids must be given largely to neutralize the poison.

Symptoms from Verdigris, Lunar Caustic, and Corrosive Sublimate.—Taste acrid and metallic; tongue dry and parched; tightening or burning pain of the throat; metallic belchings; severe vomitings, or fruitless efforts to vomit; dragging at the stomach, dreadful cholic, frequent black bloody stools, with straining; belly and stomach distended; pulse quick, small and hard; faintings, great debility, difficult breathing, cramp, cold sweats, intense head-ach, giddiness, insensibility, convulsions, and death.

Treatment.—Whites of eggs must be mixed with water, and one given every two or three minutes to promote vomiting, and to lessen the virulence of the poison. Milk, in large quantities, gum-water, or linseed tea, sugar and water, or water itself, at about 80 deg. of Fahrenheit's thermometer. Gluten, as it exists in wheat-flour, decomposes corrosive sublimate, and should be given mixed with water.

For lunar caustic a table-spoonful of common salt must be dissolved in a pint of water, and a wine-glassful taken every two minutes, to decompose the poison; after which mucilaginous drinks may be given, or purgatives may be administered.

Symptoms from Gamboge, Croton Oil, and Cantharides.—The effects of these, and also of monkshood, mezereon, and buttercup, are nearly the same, namely, nauseous odor of the breath, acrid taste, burning heat in the throat, stomach and belly; frequent vomitings, often bloody, with copious bloody stools; excruciating pain in the stomach; heat in the bladder, and stranguary or retention of urine; frightful convulsions, delirium, and death.

Treatment.—Vomiting must be excited by drinking sugar and water, milk, or linseed-tea very freely. Emollient enemata or glysters should be administered; and if symptoms of inflammation of the stomach, kidneys, or bladder supervene, they must be subdued by bleeding.

2. POISONS ENTERING INTO AND ACTING THROUGH THE BLOOD.—Poisons of this class do not produce deleterious consequences unless they are introduced into the blood, and then they affect the heart, the brain, and the organs of digestion.

Names of these Poisons.—Arsenic, prussic acid, poisonous reptiles, poisonous fish, bite of a mad-dog, opium, hellebore, henbane, hemlock, tobacco, and most of the vegetable poisons.

Symptoms from Arsenic.—A rough taste in the mouth, foetid breath, slavering, tightness of the throat; hiccup, nausea, and vomiting of brown or bloody matter; anxiety and faintings, heat and violent pain at the pit of the stomach, stools black and offensive; pulse small, frequent, and irregular; palpitations; great thirst and burning heat; breathing difficult; urine scanty, red, and bloody; delirium, convulsions of an epileptic character, and death.

Treatment.—Vomiting must be excited or encouraged by large draughts of sugared-tea, linseed-tea or other emollient fluids. Lime-water, or chalk and water, may be drank freely if the arsenic has been taken in a liquid form. Fat, oil, vinegar, charcoal powder, and vegetable decoctions, which have been recommended, are not to be relied on. Inflammatory symptoms are to be combated by bleeding from the arm and by leeches, fomentations, and frequent emollient glysters, as the symptoms may demand.

Effects of Prussic Acid, termed by Chemists Hydrocyanic Acid.—Prussic acid has a strong odor of bitter almonds, and is contained in almonds, cherry stones, peach kernels, and laurel and bay-leaves. It is the most violent of poisons, producing almost instant death, when

applied even in small quantities to the surface of the body.

Treatment. If prussic acid has been taken, emetics, such as a scruple of sulphate of zinc made into a bolus with confection of roses, are to be given with as little delay as possible; and after their operation, oil of turpentine, hartshorn, brandy, and other stimulants, capable of rousing the system, should be perseveringly employed, with warmth, friction, and blisters, to the soles of the feet and the pit of the stomach.

Symptoms from the bite of a Serpent.—A sharp pain is felt in the wounded part, which soon extends over the limb or body; great swelling, at first hard and pale, then reddish, livid, and mortified in appearance; faintings, vomitings, convulsions, and sometimes jaundice; pulse small, frequent and irregular; breathing difficult; cold sweats, followed by disturbance of the intellectual faculties; the sight fails, and the intellectual faculties are deranged; inflammation, and often extensive suppuration and gangrene, or mortification, terminate in death.

Treatment.—A moderately tight bandage must be applied above the bites, and the wound left to bleed, after being well washed with warm water; a red hot iron, or lunar caustic, must then be applied freely to it, and afterward cover it with lint, dipped in equal parts of olive oil, and spirits of hartshorn. The bandage must be removed if the inflammation be considerable. Warm diluting drinks, and small doses of ammonia or hartshorn, will cause perspiration; cover up the patient in bed, and a little warm wine may be given occasionally.

Symptoms from Poisonous Fish.—At the short interval of an hour or two, and often in much less time, after eating stale fish, a sense of weight at the stomach comes on with slight giddiness and headach, heat about the head and eyes, and considerable thirst; often an eruption of the skin (*termed nettle rash*), and in some cases death has happened.

Treatment.—An emetic should be speedily given, or vomiting may be excited by tickling the throat with the finger, and taking large draughts of warm water. Af-

ter full vomiting, an active purgative should be given, to remove any of the noxious matter that may have found its way into the intestines. Vinegar and water may be drank after the above remedies have operated, and the body may be sponged with the same. Water made sweet with the same, to which ether may be added, may be drank freely. If spasms ensue, laudanum in considerable doses is necessary.

Symptoms from the Bite of a Mad Dog.—At an uncertain interval after the bite as of a dog, a cat, or any other rabid animal, between the twentieth day and the third or fourth months, pain or uneasiness occurs in the bitten part, though the wound may have been long healed. Anxiety, uneasiness, languor, spasms, horror, disturbed sleep, and difficult breathing succeed, and are soon very much increased; violent convulsions affect the whole body, hideously distorting the muscles of the face; the eyes are red and protruded, the tongue swells, and often hangs out, and clammy saliva flows from the mouth; there is pain in the stomach, with bilious vomitings, a horror of fluids; all becoming worse till the sufferer is relieved by death.

Treatment.—It is doubtful if hydrophobia has ever been cured, and almost every remedial agent has been tried without success. The bitten part should be completely cut out, or cupping-glasses applied over it, even after it has healed, if the symptoms have not yet come on; the part should then be immersed in warm water, or washed with it as long as it will bleed, and after the most persevering washings, caustic should be applied to every part of the surface, and then the wound covered with a poultice and suffered to heal.

Symptoms from Hemlock, Laudanum, Nightshade, and most Vegetable Poisons.—The common effects of narcotic poisons are stupor, numbness, heaviness in the head, inclination to vomit, slight at first, but afterwards insupportable; a sort of intoxication, a stupid air, the pupil of the eye dilated, furious or lively delirium, sometimes pain, convulsions of different parts of the body, or palsy of the limbs; the pulse variable, but at first generally

strong and full; the breathing quick, and great anxiety and dejection, which, if not speedily removed, soon ends in death.

Treatment.—The principal object in the treatment of persons under the influence of narcotic poisons, is to rouse the sensibility so as to render the stomach alive to the irritation of emetics, and the action of other stimulants. Late experience has proved that this is best effected by repeatedly dashing cold water over the head and neck, whilst the rest of the body is kept dry and warm. Applying hartshorn (*liquor ammonia*;) to the nostrils by means of a feather, introducing a drop or two of it into each eye, and the application of a mustard plaster over the stomach, have been attended with good effects. Four or five grains of tartar emetic, or from ten to twenty of the sulphate of zinc, should be got into the stomach every quarter of an hour, and vomiting assisted by irritating the throat with the finger; active purgatives may be given after the vomiting has ceased. When as much as possible of the poison has been expelled, the patient may drink, alternately, a tea-cupful of strong hot coffee, or vinegar diluted with water. If the heat of the body declines, warmth and frictions must be perseveringly used. Vegetable acids are on no account to be given *before* the poison is expelled, and it is desirable that but little fluid of any kind should be given.

Symptoms from poisonous Mushrooms and Ketchup.—Nausea, heat and pain in the stomach and bowels, with vomiting and purging; thirst, convulsions, faintings; pulse small and frequent; delirium, dilated pupil and stupor, cold sweats, and often death.

Treatment.—The stomach and bowels must first be cleared by an emetic of tartarized antimony, followed by frequent doses of Glauber's or Epsom salts, and large stimulating injections or enemata. After the poison is evacuated, ether may be given with small quantities of brandy and water, but if inflammatory symptoms come on these should be omitted.

3. POISONS WHICH AFFECT THE NERVES.—Poisons of this

class act chiefly upon the nerves, and, through the nerves, upon the brain. The chief of these are tobacco, ardent spirits, essential oil of almonds, Croton oil, camphor, opium and laudanum, and lead.

Symptoms from Lead.—When lead in the form of sugar of lead, red lead, or the leading of earthenware, is taken, it produces an astringent metallic taste; tightening of the throat; pain in the region of the stomach; obstinate, painful, and often bloody vomitings; hiccup, convulsions, and death. When taken in small, long continued doses, it produces painter's cholic, distressing costiveness, and paralytic symptoms.

Treatment.—Glauber's or Epsom salts, dissolved in a good deal of water, should be taken freely, along with sulphuric acid; bleeding must be used if symptoms require it; and castor oil, either with or without opium, to clear the bowels, assisted by frequent emollient glysters. The warm bath should not be omitted.

Symptoms from Tobacco.—Great nausea, prostration of strength, universal tremor, violent vomiting and headache, cold sweats, convulsions, fainting, and death.

Treatment.—Evacuate the stomach, if the poison have been swallowed, by an emetic, and then give castor oil or the black draught; vegetable acids, such as vinegar and lemon-juice, may then be advantageous; but if the patient is very low, strong stimulants, such as brandy and camphor, cold water dashed over the body, and mustard poultices to the soles of the feet, may be tried.

III.—INJURIES TO THE SKIN.

The superficial injuries which it may be useful to notice here are burns and scalds, ruffled skin, cuts and wounds, knocks and bruises, frost-bite, and stings from wasps and bees.

1.—BURNS AND SCALDS.—Accidents from fire or hot water are so sudden, and often so dangerous or injurious,

that it is important for every body to know something of the treatment. There are three plans followed by medical men of different opinions; one recommending cold, another hot, and a third, oily applications; each has advantages and disadvantages.

In slight cases, it is a common and not a bad practice, to hold the burnt part to the fire as long as it can be endured. In more severe cases, the part is freely bathed with a piece of linen dipped in heated spirit of turpentine, or any sort of spirits of wine, such as gin or whiskey, and then covered with a liniment composed of one part of oil of turpentine and two parts of basilicon or resinous ointment. At first this will cause some smarting, but in the course of an hour or two it gradually abates, and the patient feels comparatively easy. Should blisters have risen, or the skin been removed, and the part be raw, the treatment is the same; since, in both cases, equal relief will be experienced.

The first dressing should continue on for twenty-four hours, when it may be bathed with something milder, as common spirits, vinegar, or tincture of opium, a little heated; and it should be dressed with Turner's cerate, or sugar-of-lead ointment. If the burn is extensive, care should be taken not to expose more than a small part at a time to the air. If blisters have risen, they may be opened with a needle.

When a raw or red surface is the consequence of such an accident, the best application is finely powdered chalk dusted over the surface, and covered with a dressing of simple ointment, or fine cotton wool, or unglazed wadding, wrapped over it, which is also good in blistered burns and scalds. In severe cases, where a part is so injured that its vitality is destroyed, warm poultices, smeared with camphorated oil, are to be frequently applied. In mild cases, on the contrary, where the injury is more superficial, bathing the parts once with the heated spirit of turpentine, and then dressing with the liniment formerly mentioned, is all that is required.

In the inflammation and fever excited by burns, bleeding and strong purgatives are improper; and it will be

best to give from thirty to fifty drops of laudanum ; or, when there is great torpor and sinking of the system, even brandy and other strong stimulants have been found useful. This treatment is to be continued till the surface begins to secrete matter, when a mild cooling regimen is to be instituted.

In applying the turpentine externally, care must be taken not to continue it too long, since it may produce a secondary inflammation. This accident, when it takes place, is easily remedied by an emollient poultice ; a dressing, spread with simple ointment, being interposed between it and the inflamed surface. Some surgeons prefer bathing the parts with vinegar, in place of the spirit of turpentine.

Emollient Treatment.—This plan is intended to soothe the pain, and protect the parts from the air. It consists of oily or soapy applications, of which that employed at the Carron Iron Works, called Carron oil, is the best. It is made by mixing equal parts of linseed oil and lime water.

When any of these plans of treatment has been once adopted, it ought to be continued without changing to another, otherwise bad consequences may ensue.

2. **GRAZED OR RUFFLED SKIN.**—If the skin be rubbed off by a stone, a piece of wood, or any other substance, the first thing necessary, is to remove all sand or dirt from the wound by milk-warm water ; then to bathe it with spirits and water, till the pain has somewhat abated ; and, to defend the tender surface from the external air, a piece of dry lint or cotton wool laid over it. When this comes off, which should be delayed as long as possible, if there should be any swelling or pain from inflammation, a poultice should be applied ; if there be none, it may be dressed with any simple cerate. But, before this, all greasy and oily applications are improper. Lotion or ointments, containing sugar of lead, are to be avoided, since the lead may be absorbed, and produce mischief.

3. **EXCORIATIONS AND CHAFING.**—When the skin is

galled by riding, or, in infancy, by inattention to cleanliness, it ought to be bathed with warm milk and water, to clean it, and afterwards with cold water to wash off the milk and remove the inflammation. Fine fuller's earth, moistened with water or spermaceti ointment, is good for anointing the parts. When there is much inflammation, a bread and water poultice may be necessary.

4. CUTS AND WOUNDS.—When the skin is injured by cutting or piercing, all rust, splinters of wood, and the like, should be washed out; and if the bleeding does not stop of its own accord, it may be necessary to bathe the part with cold water, or touch it with some turpentine, or compound tincture of benzoin; though this will retard the healing. What is of most importance, is bringing the edges of the wound nicely together, and keeping them so by slips of sticking-plaster and a bandage. In slight cuts, this mode will cause them to close in forty-eight hours, or less.

The first dressing ought to continue on for at least two days, after which it may be removed, and lint applied. If any part of the first dressing sticks so close as not to be removed with ease or safety to the patient, it may be allowed to continue, and fresh lint dipped in sweet oil laid over it. This will soften it, so as to make it come off easily at next dressing. Afterwards, the wound may be dressed twice a day, in the same manner, till it be quite healed. Those who are fond of salves, or ointments, may, after the wound is become very superficial, dress it with the yellow basilicon ointment; and if fungus, or what is called proud flesh, should rise in the wound, it may be checked, by mixing with the ointment a little burnt alum. When a wound is greatly inflamed, the most proper application is a poultice of bread and milk, softened with a little sweet oil or fresh butter. This must be applied instead of the plaster, and should be changed two or three times a day.

When a wound penetrates into the breast or the bowels, or where any large blood-vessel is cut, a surgeon ought to be immediately called, otherwise the pa-

tient may lose his life. But if the discharge of blood is so great, that if it be not stopped the patient may die even before a surgeon can arrive, if the wound be in any of the limbs, the bleeding may generally be stopped by applying a tight bandage a little above the wound ; such as a strong broad garter, or a silk handkerchief, slack enough to admit easily a small piece of stick to be put under it, which must be twisted till the bleeding stops.

5. **BLOWS, BRUISES, AND CONTUSIONS.** Bruises are often productive of worse consequences than cuts or wounds. In slight bruises, it will be sufficient to bathe the part with warm vinegar, to which a little brandy or rum may be added ; and to keep cloths wet with this mixture, constantly applied to it. This is more proper than rubbing it with brandy, spirits of wine, or other ardent spirits, which are commonly used in such cases. In some parts of the country, the peasants apply to a recent bruise a cataplasm of fresh cow dung with very happy effects. Scraped briony root is also good.

When a bruise is very violent, the patient ought immediately to be bled, and put upon a proper regimen. His food should be light and cool, and his drink weak and of an opening nature ; as whey sweetened with honey, decoctions of tamarinds, barley water, cream of tartar, whey, and the like. The bruised part must be bathed with vinegar and water, as directed above ; and a poultice, made by boiling crumbs of bread, elder-flowers, and camomile flowers, in equal quantities of vinegar and water, applied to it. This poultice is peculiarly proper when a wound is joined to the bruise. It may be renewed two or three times a day.

As the structure of the vessels is totally destroyed by a violent bruise, there often ensues a great loss of substance, which produces an ulcerous sore, very difficult to cure. If the bone be affected, the sore will not heal before the diseased part of the bone separates, and comes out through the wound. This is often a very slow operation, and may even require several years to be completed. Hence it happens, that these sores are frequent-

ly mistaken for the king's evil, and treated as such, though, in fact, they proceed slowly from the injury which the solid parts received from the blow.

Patients in this situation are pestered with different advices. Every one who sees them proposes a new remedy, till the sore is, in a manner, poisoned with various and opposite applications, and is often at length rendered absolutely incurable.

6. PARTS FROST-BITTEN.—Frost-bite is in some measure similar to a bad bruise. On exposure to freezing cold, a part becomes literally frozen, and the circulation and feeling are destroyed. When a limb in such a state is suddenly brought near a fire, the certain consequence is a slow inflammation, ending in almost immediate mortification. To prevent therefore all sudden increase of temperature, the limb should be plunged in ice water, or rubbed with snow. Then gradually, by almost imperceptible degrees, the heat may be raised till it reach the natural warmth of the blood. The person should be laid in a room without a fire, and should be covered with no more than his usual allowance of bed-clothes; nor ought anything heating or stimulant to be administered internally, but the system allowed gradually to recover.

When the hands or feet are greatly benumbed with cold, they ought either to be put into cold water, or rubbed with snow, till they recover their natural warmth. Every person must have observed, when his hands were even but slightly affected with cold, that the best way to warm them was by washing them in cold water, and continuing to rub them well for some time.

7. CHILBLAINS AND KIBES.—*Causes and Symptoms.*—Children and old people, or those who are weak and delicate at any age, particularly females, are most subject to chilblains, which arise from deficiency of vigour in the fibres of the feet, the hands, and sometimes even the nose, ears, and lips, from exposure to great cold, or currents of cold air. At first there is redness, swelling,

a sense of tingling, intolerable itching, which is increased by heat. As it proceeds, the part becomes blue, and the painful itching excessive. Then little vesicles arise, burst, and leave the part sore and ulcerated, often eating deep into the flesh, and even to the bone; and in this stage the sores or kibes are extremely obstinate and difficult to be cured, and mortification may ensue.

Treatment.—To prevent chilblains, never run rashly to the fire when the hands or feet are very cold; nor expose the hands and feet suddenly to cold when they are warm and perspiring; as in either case, chilblains will probably arise. To strengthen the parts, take a quantity of alum, make a strong solution of it in cold water, and bathe them with it night and morning. The water caught from oysters, while opening them, is also good; and the following

Wash.—Dissolve two drachms of acetate of lead, in half a pint of cold water; add a glass of good rum or brandy; mix, till it becomes of a uniform white; dip linen cloths in it, and apply them to the parts, renewing them frequently during the day. This is often sold high, as a quack medicine.

IV.—MISCELLANEOUS INJURIES.

1. *SPRAINS.*—Sprains are most common in the ankle and the wrist, the soft parts around the joints being stretched, and sinews sometimes more or less torn. When a part has been sprained, there is felt at first a sense of weakness, with more or less pain, which gradually becomes more acute, in proportion to the inflammation produced. The joint then becomes swollen and tense, and the surface red, and warmer than natural. If it be neglected, or if the person be unhealthy, it may lay the foundation of a white swelling.

Treatment.—In a recent sprain, inflammation may be partly prevented by a lotion, composed of one part of spirit of wine, one of laudanum, and three of cold water. The part also may be supported by a moderately tight

bandage, and perfect rest to the limb in the horizontal position, should be allowed. But if inflammation does come on, then the bandage must be withdrawn; and in place of the above lotion, a warm one of sugar-of-lead water may be used. It is always proper to apply a good many leeches, to bleed from the arm, and to take Epsom or Glauber salts. In bad cases, a blister will in general perfect the cure. The stiffness which sometimes remains may be removed by rubbing, and the like.

2. RUPTURES.—*Causes and Symptoms.*—In children, rupture may be occasioned by excessive crying, coughing, vomiting, or the like. In grown people, it is commonly the effect of blows, or violent exertions of the strength; as leaping, and carrying weights. In both, a relaxed habit, indolence, and an oily or very moist diet, dispose the body to rupture.

Treatment.—On the first appearance of a rupture in an infant, it ought to be laid upon its back, with its head very low. While in this posture, if the gut does not return of itself, it may easily be put up by gentle pressure. After it is returned, a piece of sticking plaster may be applied over the part, and a proper truss or bandage must be constantly worn for a considerable time. The child must, as far as possible, be kept from crying, and from all violent motion, till the rupture is quite healed.

In grown persons, when the gut has been forced down with great violence, or happens, from any cause, to be inflamed, it is often very difficult to return it, and sometimes quite impracticable without a surgical operation. In ordinary cases, after the sufferer has been bled he must be laid upon his back, with his head very low, and his lower extremities raised high with pillows. In this situation, flannel-cloths wrung out of warm water, must be applied for a considerable time. If this should not prove successful, recourse must be had to pressure. If the tumor be very hard, considerable force will be necessary; but it is not force alone which succeeds here. After the gut has been returned, a truss or bandage must be worn.

3. LIMBS PUT OUT OF JOINT OR DISLOCATED.—Limbs when put out of joint are most easily managed the moment after the accident, before inflammation and swelling take place, and consequently often before a surgeon can be procured. The marks of a limb being really out of joint are a change in the form of the joint, a lengthening or shortening of the limb, and an incapability of motion. In detecting the accident, great assistance may be derived from comparing it with the joint of the opposite side.

Treatment.—The limb must be forcibly pulled to counteract the drawing of the muscles; the extending force is to be gradually increased, and is to be applied at first in the direction in which the bone may be displaced; but by degrees, it is to be brought to a line parallel with the centre axis of the socket. At the same time, some one is to endeavor to raise the head of the bone over the edge of the cavity.

4. BROKEN BONES.—If a person be found lying on the ground speechless, do not hastily endeavor to raise him, but first search whether any of the limbs are broken, lest in raising him the injury be increased by the ends of the broken bone being forced through the flesh and skin. If the thigh or leg be broken, attempt not to raise him till some mode has been provided of conveying him to his bed, remembering that being laid on a door or a shutter, and thus conveyed by two or four men, he will suffer much less injury than if conveyed on any kind of carriage. If the arm be broken in the upper part, let it be supported in a sling, with the palm of the hand turned to the body. If the person continues senseless, the head has probably received some serious injury, demanding great care in his removal, and the immediate attention of some experienced surgeon.

If after a blow, by a fall or otherwise, on the side, considerable pain is felt, and the breathing rendered difficult, it is almost certain one or more of the ribs is broken. Free bleeding and absolute rest will be demanded in this case, which very frequently terminates fatally

from want of being treated from the first with that decided firmness it demands. Nothing is more frequent than to see persons, after an accident of this kind, exposed to the air, and even endeavoring to follow their usual occupations; whereas the most strict confinement to the house or bed ought in these cases to be adhered to.

Broken bones in young persons become united from the twenty-eighth to the thirtieth day: in adults from the thirtieth to the thirty-fifth: and in the aged, from the thirty-fifth to the fortieth day.

5. MOTES, SAND, AND OTHER SUBSTANCES IN THE EYES.

—When an insect, a grain of sand, or any similar substance lodges on the surface of the eye, the necessary consequence must be pain and acute inflammation, terminating, if neglected, in obscurity and dimness of sight, and even loss of vision. The substance may either lie loose on the surface, or, having penetrated the outer coat, may there remain fixed. In the former case, it is easily removed by means of a camel-hair pencil dipped in oil, or, what is better, a piece of paper rolled into the size of a quill and softened in the mouth. When the substance is fixed in the coats of the eye, then a surgical operation may be necessary to remove it. This accident is frequent among smiths, and is known among them by the name of a fire in the eye, some one of the craft being usually celebrated for removing it, employing for that purpose his nail, his tongue, or the first rude instrument that may come within his reach.

6. INFLAMMATION OF THE EYES.—*Causes.*—In the case of fine sand or the like floating about in the air, as in Egypt, it gets into the eyes, and produces redness and inflammation, which often arises also when no such cause can be traced.

Treatment.—Eye-waters and ointments, with other external applications, do mischief twenty times for once they do good; and hence we ought to be very cautious how we use such things. Bleeding is always necessary, and this as near the part affected as possible. Leeches

are often applied to the temples, or under the eyes, with good effect. In obstinate cases, it will be necessary to repeat the operation several times. The patient may take a small dose of Epsom salts and cream of tartar, every second or third day, or a decoction of tamarinds with senna; or gentle doses of rhubarb and nitre, or any other mild purgative will answer the same end. If the inflammation does not yield to these evacuations, blistering plasters must be applied to the temples, behind the ears, or upon the neck. When it is of long standing and obstinate, the golden ointment, that is, the ointment of the nitric oxide of mercury, or Singleton's, which is equal parts of lard and orpiment, will do good.

7. PEAS, INSECTS, AND OTHER SUBSTANCES IN THE EAR.
—The opening into the outer ear, as far as the drum, is only about half an inch, and is defended by a sort of down as well as a sort of wax. Peas, bits of slate pencil among boys at school, and other things, sometimes get into the ear, and give no little uneasiness. They may be extracted by means of a small pair of forceps, having previously injected some of the oil of almonds. Occasionally, ants and caterpillars have found their way in, and even insects have been known to deposit their eggs there. We sometimes succeed in removing them, by introducing into the ear a piece of lint dipped in honey. Camphorated oil may also be tried.

CHOLERA!

SIMPLE DIRECTIONS

FOR THE

Prevention, Arresting, and Treatment

OF

ASIATIC CHOLERA.

DOCTOR McCORMICK, of the United States Army, and one of the gentlemen constituting Gen. Taylor's suite while on his way to Washington, is the author of the following remarks on the pathology and treatment of cholera. They were originally written and transmitted, in a private letter, to a friend at the North, who, knowing that Dr. McCormick's experience in the treatment of cholera embraced the visitation of that disease at Washington, in 1832, and recently at New Orleans, very naturally desired to learn his views with regard to the best mode of treating it. An-

other of the gentlemen accompanying Gen. Taylor, who was aware that Dr. McCormick had committed his views on the subject to writing, and desirous to see them in print, applied to the Doctor for a copy. It will be found annexed :

Cholera has four distinctly marked stages :

1st. Loose dejections.

2d. Watery discharges by the stomach, bowels and skin.

3d. Corpse-like coldness, and blueness of the skin or collapse.

4th. Reaction, choleric fever, a state strongly resembling Typhus.

The first consists in a simple looseness of the bowels—the dejections being frequent, and more or less copious, and then the consistence decreasing with each evacuation, until it arrives at the next plainly marked stage of the disease. The second period: the evacuations now consist of little else than a watery fluid. With these discharges the thirst is always intense, and the voice begins to fail. The stomach becomes involved, pouring forth the same watery fluid in greater or less abundance, and ushered in with this evacuation from the stomach, bowels and skin; and apparently intimately connected with it is seen the

most *painfully* distressing phenomenon of this terrific malady—the cramps and spasms—causing the patient at times to writhe in agony, giving forth every expression of pain that human torture could provoke.

The third period follows, and consists of collapse. This seems naturally explained by the waste of the watery portion of the blood and the great exhaustion of the nervous system, so intimately connected with it, and with the violent cramps and spasms. The voice has become more feeble, the watery evacuations cease, the agony is over, for the spasms have also ceased, and the patient lies indifferent, apathetic, fearless, and craves only drink. The thirst continues intense, becomes insatiable, and seems to exist in a direct ratio to the quantity of watery fluid poured forth by the discharges, and to depend thereon. It seems to arise from an instinctive desire and urgent demand to supply the waste and drainage of the system. The whole body shrinks, the features become contracted, pointed, peculiar, (choleric countenance,) the eyes deeply sunken in their sockets, balls rolled upwards, or natural, expressing great suffering, or total indifference. The skin is as cold as a corpse, and moist, of a bluish hue, varying both in intensity of color, and extent of surface it occupies;

the hands and feet particularly are shrivelled and corrugated, and greatly shrunken, having lost at least one-third of their bulk, and look as if long macerated in water, (like a wash-woman's hand,) the pulse is scarcely discernible or extinct, and the action of the heart feeble; the air enters the lungs, but respiration is laborious, with a sense of suffocation from the changed condition of the blood, that prevents the full vivifying influence of the air on it—the spissidity being such, that it does not flow in its usual channels, which expose so great a surface to the action of the air throughout its minute and abundant capillaries. The voice, enfeebled and greatly diminished, has become husky and nearly extinct, and the demand it makes is still for cold drinks—ice water. They complain of being parched, burning up, and yet the whole surface is icy cold, and possesses an exalted sensibility: sinapisms, blisters, &c., are loudly complained of as burning like fire—insupportable; even the hand of a healthy person, brought in contact with a collapsed cholera patient, I have heard loudly complained of as burning. The tongue is cold, broad, flat and dry, or mucous and pasty; the abdomen retracted. In short, the whole body has become collapsed. The blood, changed in its character, deprived of its water portion, no longer traverses its accustomed rounds, but collects in

the heart and veins, especially the larger trunks, in undue quantity. This change of place, arising from a change in the spissidity of the blood, gives rise in its turn to other changes. There is no arterial blood; there is no secretion, perhaps, except that of bile, for, as before stated, the blood has forsaken the arteries, and retreated into the veins.

Throughout all this frightful havoc of the physical frame, the mind moves calmly, clearly, self-possessed, and begins to feel the destructive influence, or is gone (with but few exceptions, *only* when the brain has to be supplied with ærated blood—only when the individual is *in articulo mortis*).

The fourth stage seldom occurs. But when an individual becomes collapsed and lives through it, the fourth stage is present; it is one of reaction, resembling typhus.

TREATMENT.

It is always of great, and sometime even of vital importance, that the patient should lie in bed.

In the first stage give calomel and opium, according to the nature and frequency of the stools.

I have usually commenced in ordinary cases by giving one of the following pills after each *loose* evacuation, viz: calomel thirty grains, powdered opium six grains; mix intimately, and divide into six pills.

In this way, in the course of a few hours, you will probably give twenty grains of calomel and four cases of opium, which, in ordinary cases, will generally prove sufficient, and even in most severe cases you will have administered as much calomel as will be necessary.

When this has proved sufficient, the evacuations will have become far less frequent, and changed in character, especially in consistence. In this early stage the danger is greater the more frequent and the thinner, or more liquid and watery the stools may become. You can continue, therefore, to give one of the calomel and opium pills after each evacuation, if of *this character*, until the whole six are taken; and if the passages still continue, it becomes necessary to continue the opium as follows :

Powdered opium, six grains; powdered camphor, twelve grains; mixed intimately, and made into six pills, giving one of the pills after each evacuation. Rest in bed, fomentation or flaxseed

poultices applied to the abdomen, and mustard plasters and warm mustard foot-baths prove also highly beneficial.

When the attack is sudden and severe, give at one dose twenty grains of calomel and two of opium, and repeat the opium and camphor pills as directed, and use the sinapisms, poultices, &c.

In the second period, when the watery *evacuations* set in, they either resemble in fluidity and color a mustard foot-bath, or are of a rice-water character, with a white powder settling at the bottom of the vessel, or watery, with white flocculi or flakes interspersed in it, making it somewhat turbid, looking like whey. The voice fails also, and cramps or spasms come on in the legs, arms, and sometimes in the bowels.

The case is now extremely urgent, and unless the watery discharges can be arrested, the patient must pass into the collapse, from which there is little if any hope.

I have been in the habit of giving sugar of lead and opium in the following way, in pills :

Sugar of lead, one drachm; powdered opium, twelve grains; mix intimately, and make into twelve pills. Give one after every watery evacua-

tion, and if these are copious, oftener, or in larger doses, say two pills at a time.

Or it may be given by injection, thus :

Take sugar of lead one drachm; dissolve in water six ounces, (three wineglasses full,) and add a teaspoonful of laudanum, and give half as an injection, and repeat as may be necessary.

To allay the distressing nausea, vomiting, and insatiable thirst, (in this and the following stage of collapse,) use—

Cræosote, four drops; mucilage of gum arabic, or flaxseed tea, one tablespoonful, *shake well together*, and give a teaspoonful four or five times every day, or oftener, as may be necessary.

As in this stage they are about to pass into collapse if it is not stopped, the use of stimulants soon becomes necessary. I have used champagne brandy toddy and carbonate of ammonia, as follows :

Carbonate of ammonia, two drachms; powdered gum arabic, two drachms; water, three wineglasses full; mix, and give a tablespoonful every fifteen minutes or half-hour, as may be necessary, using at the same time the brandy or wine alone

Direct sinapisms and blisters over the pit of the stomach and to the extremities. The spasms are sometimes distressingly severe in this period. They are greatly relieved by friction with No. 6, (Thompsonian remedy,) heated and used as a liniment, or red pepper and whiskey heated together.

In the collapse little can be done except giving the cræsote mixture, a teaspoonful every two or three hours, and using the stimulants above-named as freely as they can be borne. Apply blisters and sinapisms, and give warm chicken-broth either by mouth or as an injection. Give also as a stimulant the following:

Powdered camphor, two drachms; Hoffman's anodyne, two ounces; mix from a teaspoonful to a tablespoonful at a dose, and repeat according to the effect.

This remedy, in the dose a teaspoonful three or four times a day, in half a wineglass full of cold water, is an excellent remedy, in the premonitory and forming stage, for the looseness and griping.

The fourth period is treated like typhus.

In all the foregoing it will be seen that opium is the great remedy, and the calomel and sugar of

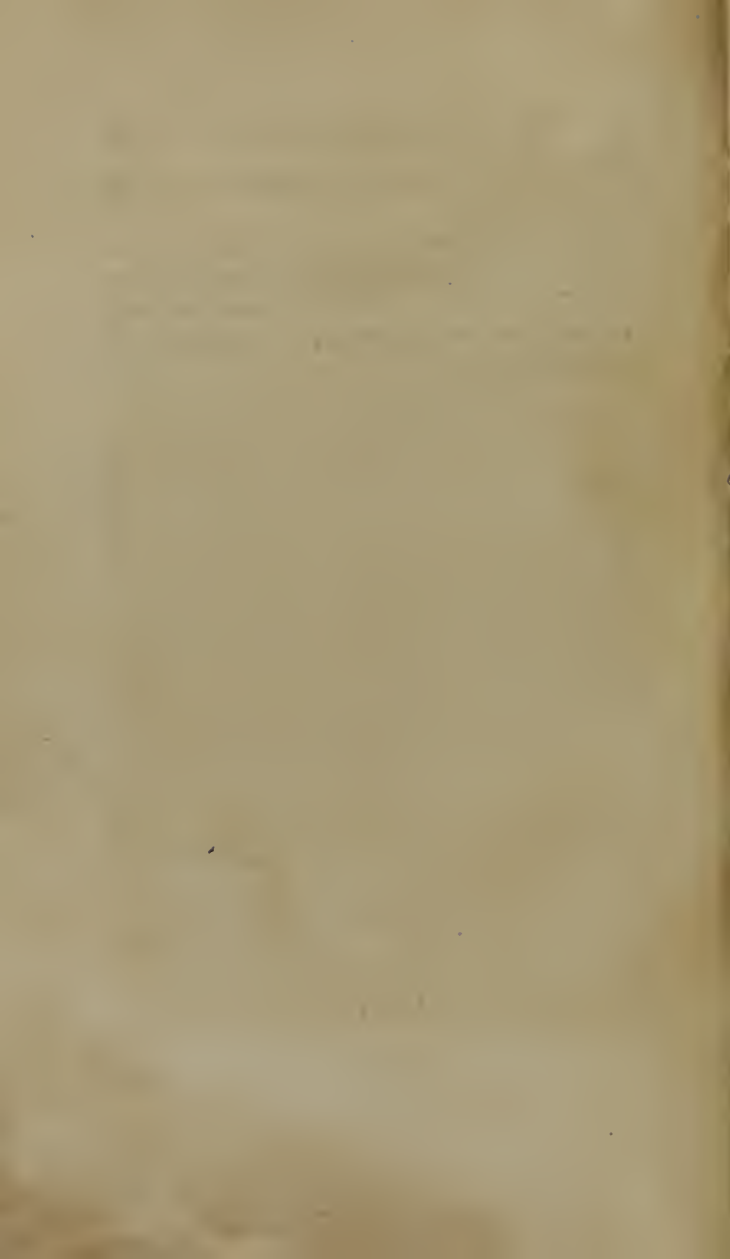
lead its main adjuvants. Their action, to my mind, in affording relief, is easily explained.

From careful examination of the symptoms of the disease, it is readily seen that its first manifestations are all referable to the alimentary canal; there is an exalted sensibility of the stomach and bowels at the first outset—an uneasiness that very speedily results in loose dejections; an irritation seems to be set up throughout the alimentary canal, the peristaltic movements become rapidly increased—the secretions are profusely poured forth, becoming thinner and thinner, while the irritation augments until it resembles somewhat that caused by the hydragogue cathartics, such as elaterium, but which in its action far outstrips them in effect. When it arrives at its height, the discharges consist solely of the watery portion of the blood, separated from it throughout the whole extent of the intestinal tube.

That the cause of this disease is poison, I cannot decide. It certainly does not enter the blood, or if it does, opium is a certain antidote to it. It seems more reasonable to me to regard it as acting on the nervous system at large—in a way somewhat analagous to fear, causing a reflux of blood on internal parts, looseness and relaxation of the

bowels, and sphincters, and a sensation of faintness and sinking.

There is no disease milder in its first attack—none more frightful and fatal if neglected. Like a hay-rick on fire, at its outset a grasp of the hand may extinguish it—neglected a few moments, destruction is inevitable.



NOTES

BY THE AMERICAN EDITOR.

1. **DYSENTERY.**—In the month of September, 1843, H. M. W., Esq., of the city of New-York, placed his youngest son, fifteen months old, under my care, after he had been abandoned by the physicians who first treated him. They considered his case a hopeless one. I found the child reduced to a skeleton. The intestines had lost all power to retain any thing. The discharges from the bowels were bloody, very offensive, and incontinently ejected. Such had been the state of this child's bowels for three days previous to my seeing it. My mode of treatment was as follows:—Calomel, one-eighth of a grain; pulv. ipecac., grains 2; sulphate of quinine, grains 2; pulv. doveri, grains 3; prepared chalk, grains 4. These powders were mixed together and divided into six portions, one of which was given every four hours. At the same time, I used an injection composed of the following articles: Chloride of lime, 20 grains to 8 ounces of water, adding to it tincture of opium one tea-spoonful. Of this I injected three or four times the first day. The day following I increased the lime 10 grains. This treatment acted like a charm. The discharges were changed from a bloody mucous to mucous. **SECOND DAY'S TREATMENT.**—Made a strong decoction of black tea, added to it pulverised gum-arabic two table-spoonfuls, one tea-spoonful of laudanum; injected three times a day, and, at the same time, gave pulverised rhubarb, grains 4; sulphate of quinine, grains 2, pulverised cinnamon, grains 4; prepared chalk, grains 4; sugar of lead, grains 3: mixed together and divided into 8 powders. Gave one in molasses every three hours. To produce sleep, when necessary, I gave pulv. doveri, grains 4. The diet during the treatment consisted of flax-seed tea, arrow root, and calves'-feet jelly. By this treatment the patient was thoroughly cured, although his life had been despaired of, and his case appeared incurable.

2. **DISCHARGE FROM THE EAR.**—Miss C. applied to me in June, 1843, and stated that she had been afflicted with a very troublesome and offensive discharge from her left ear for ten years. She had tried many remedies, and adopted the prescriptions of many skilful physicians without relief.

TREATMENT.—Ordered her bowels to be opened with a dose of salts. The day after, gave her the compound preparation of sarsaparilla. To every eight ounces I added one grain of corrosive sublimate—a

tea-spoonful of the mixture to be taken four times a day, and continued until a copperish taste was felt in the mouth. Every other day I applied caustic to a fungus growth of flesh growing in the bottom of the ear. After six or eight applications, I made use of the following injection:—Caustic, 25 grains to an ounce of water, injected with a glass syringe into the ear once every day for several days, when all the discharge ceased. I then injected, every third day, a tolerably strong solution of alum water; and in two weeks the ear was well.

3. PAINFUL AND IRREGULAR MENSTRUATION.—Females, residing in this cold and changeable climate, are so frequently troubled and alarmed in consequence of a partial or total suppression of the menstruating process, that I consider it the duty of every physician to give them as much light on the subject as practicable. Almost all females, particularly mothers, are well acquainted with the symptoms which accompany irregular and painful menstruation. I will only give a few of the most prominent. Severe pains in the back, loins, and lower part of the abdomen, are usually felt six or eight hours previous to the appearance of the menstrual discharge. Sometimes the catamenia will begin to flow quite freely, and without much pain, and, all of a sudden, they will be arrested, and the pains will come on more violently than ever in the hips, loins, back, and thighs, with a very great BEARING DOWN in the pelvis. Sometimes a very slight discharge will continue for several days, accompanied with the most excruciating pains in those parts of the body already mentioned. Females are not unfrequently thrown into a high state of fever, or experience sickness of the stomach, vomiting, dizziness and pain in the head. As the application of cold is most commonly the exciting cause to the interruption of the menstrual discharge, females should be very careful not to expose themselves to cold thinly clad, or get their feet wet, just before their courses are expected. But should such a state of things occur as has been described above, no time should be lost in resorting to the means best adapted to the restoration of health.

In the first place, the most simple and palliative remedies should be resorted to, unless there is high arterial excitement, and contrary symptoms are indicated. One ounce of salts should be taken, and, after it has commenced to operate, bathe the feet in warm water, with half a handful of mustard added to it. Then let the patient be placed in bed, covered with several blankets, and drink freely of hot teas or hot lemonades; and, if free perspiration can be induced, the desired object will usually be obtained. Should these applications fail, take pulv. Doveri, grains 28; camphor, grains 16: mix, and divide into five powders. Take one in molasses every two or three hours. Warm hip baths are often very useful; bathing the whole body in warm water is better. I have known dancing in a warm room to bring on a profuse discharge, after many remedies had failed. Horse-back riding is frequently resorted to with success. The following prescription will, not unfrequently, be serviceable:—Muriæ tinct. of ferri. Commence by taking five drops three times a day, and increase the dose every day three drops, until it amounts to 30 or 35 drops at a dose. Aloetic pills are frequently very effective—three taken every third or fourth night. The sulphate of iron, 1 grain to a pill, made up with soap and a few drops of the oil of cinnamon, is a good prescription. Two or three of these pills, taken every

other night for several weeks, have frequently restored difficult menstruation. Should there be a hard full pulse, with sickness at the stomach, fever, vomiting, pain and dizziness in the head, no time should be lost in relieving the patient of from fifteen to twenty ounces of blood; and, in this most distressing complaint, I am convinced, from experience, that blood should be drawn from one or both of the feet, in preference to the arm. To obtain the greatest benefit from blood-letting in such cases, a large orifice should be made in one of the veins on the foot, (being careful not to wound the tendons beneath,) and placing it into warm water, so that the required quantity could be obtained as quickly as possible. The bowels should then be freely opened with a dose of salts, the patient placed in bed, and the following administered:—Take tart. emetic, grains 3; water, 8 ounces: a table-spoonful to be taken every twenty or forty minutes. After all excitement has been allayed, and some time has elapsed without any appearance of the catamenia, the following prescription will most usually bring it on:—

RECIPE.—Infus. cascarillæ, 1 1-2 ounces; tinct. sabinæ, comp., 1 drachm; aq. pimentæ, 1-2 an ounce; syrup of ginger, 1 drachm: take a tea-spoonful every four hours. Pills composed of myrrh and aloes are among the most useful purgatives in this disease.

4. PREGNANCY.—In May, 1842, Mrs. J. consulted me, and stated that she had been married nearly three years; and although she enjoyed tolerably good health, and was regular in her monthly courses, pregnancy had never taken place. Her object was, to know whether any hope of offspring could be held out to her. I suggested that there might be some obstruction at the mouth of the womb, and that if such were the fact, and it could be removed, pregnancy might follow. She at once submitted to the operation of passing a bougie into the womb, and, in three weeks after, she became pregnant.

A SIMILAR CASE.—In the early part of January, 1843, Mrs. W. applied to me for advice on the same subject. I recommended and performed the same operation, and pregnancy soon followed.

5. LEUCORRHEA, &c.—Watery Discharges—Purulent Discharges—Transparent Mucous Discharges—Sanguineous Discharges—White Mucous Discharges. Nearly all females are more or less troubled with discharges of these kinds—differing in consistence and abundance, but always weakening to the constitution, and occasionally offensive. It is impossible for me to go into all the details relating to those complaints peculiar to the female sex, in these short notes; but it is my opinion, that in nine cases out of ten, these morbid affections can be cured by a proper and judicious course of treatment, where all the circumstances of the case are fully developed to the physician. And it gives me great pleasure to have it in my power to state, from experience, that our females are daily becoming wise on this subject, intimately affecting, as it does, their health and happiness. There is nothing so vitally important to the well-being of either sex, as a sound and healthy condition of the procreative organs. In March, 1843, I was called to see Mrs. P. D., when she related to me the following history of her case:—She said that since the birth of her first child, four years previous to this date, she had been troubled with discharges in such large quantities as to render her life almost a burden to her, and that, from a false notion, she had suffered all this

time rather than make her condition known to a physician. I made an examination, and found that the discharge came from the uterus altogether, and was of a thick and ropy nature. For the treatment of this case, I made use of a solution of the acet. of plumbi, commencing with 6 grains to the ounce, and increasing it to 40. My next injections were of the sulph. copper; and the last, a very strong solution of nit. argent.: all of which I threw directly into the uterus. I recommended cold bathing and shower baths, to be taken alternately three or four times a week—at the same time to take internally comp. tinct. of gent., a table-spoonful three times a day; advising her to take as much out-door exercise, riding, &c., as she could. I allowed her a generous diet, and kept the bowels open with salts, senna, and manna. In twelve weeks after the commencement of this treatment, she had improved in her general health very much, and the discharges were much abated. I now gave her pills composed of the carbonate of iron, sabina, and oil of cinnamon. This, together with the sulphate of quinine, restored her to perfect health five months after I first saw her.

THE END.

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